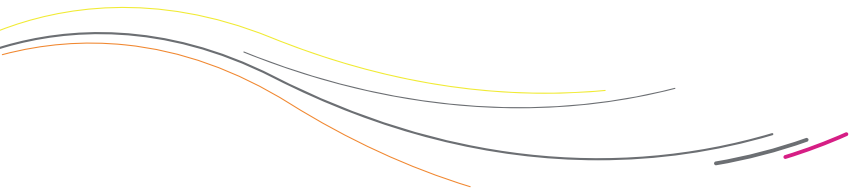
CROSS DJ

CROSS DJ for
U-MIX CONTROL PRO

CROSS DJ LE

CROSS DJ LE for
U-MIX CONTROL 2

USER MANUAL



Fine **DJ** Solutions.

MIXVIBES

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1/ Welcome

Thank you for choosing CROSS DJ and welcome to the world of digital DJing.

CROSS DJ/CROSS DJ LE is a great, compact, plug and play, digital DJ solution that is available in different packages:

- **CROSS DJ** CROSS DJ is the software only package. CROSS DJ is compatible with every DJ MIDI controller and it includes many built-in MIDI presets for a broad range of DJ controllers.
- **U-MIX CONTROL PRO DJ Package** This package consists of the DJ controller U-MIX CONTROL PRO with integrated soundcard and the CROSS DJ software.
- **U-MIX CONTROL 2 DJ Package** This package consists of the DJ controller U-MIX CONTROL 2 and the CROSS DJ LE software.
- **CROSS DJ LE** CROSS DJ LE is only available bundled with various controllers or other products from different manufacturers

The feature sets of CROSS DJ and CROSS DJ LE are almost identical. The main difference between CROSS DJ and CROSS DJ LE is that you can use CROSS DJ with all DJ controllers and DJ soundcards available; CROSS DJ LE (Limited Edition) can however, only be used in conjunction with the DJ controller that the software was bundled with. The bundled controller needs to be connected before you launch CROSS DJ LE. Furthermore you cannot customize the MIDI mapping for the bundled controller.

CROSS DJ/CROSS DJ LE was designed to provide a simple and user-friendly environment, so you can focus on mixing tracks and having fun.

Take a few minutes to run through this manual and you'll be on your way to making great mixes on CROSS in no time at all!

Be part of the MixVibes online community and share your experiences with other DJs, find help and advice, and also check for available updates. See you online on the forum (http://forum.mixvibes.com) or on the website (http://www.mixvibes.com).

Minimum System Requirements

- Windows XP SP2, Windows Vista SP2 or Windows 7. We recommend using Windows 7 or XP instead of Windows Vista.
  OR
  Mac OS X 10.4 or higher
- Intel Core 2 Duo/1.8GHz or equivalent CPU
- 1 GB RAM
- One available USB port
- Hard drive space for music

U-MIX CONTROL PRO Box Contents

- CROSS DJ installation disc
- U-MIX CONTROL PRO - USB DJ MIDI controller with an internal audio interface
- 1 USB cable; 1 RCA cable; 1 male RCA to male mini jack (3.5mm)

U-MIX CONTROL 2 Box Contents

- CROSS DJ LE installation disc
- U-MIX CONTROL 2 - USB DJ MIDI controller
- 1 USB cable

CROSS DJ LE Box Contents

- CROSS DJ LE installation disc
- Controller of your manufacturer
- Further content may vary depending on the package you own

Please have look at the safety notes for U-MIX CONTROL PRO and U-MIX CONTROL 2 before using these controllers. The safety notes can be found at the end of this manual.

2/ Software Installation

Please login to our forum (http://forum.mixvibes.com) in order to register your product and to check for the latest download version of CROSS DJ software.

Insert the installation disc into the CD-ROM drive of your computer and open the drive in Windows Explorer or Mac Finder. Check the filename of the installer application as it contains the version number of the software that will be installed.

If the version available on the MixVibes website is newer than the version on your CD-ROM, we recommend installing the newer version instead of the one on the CD-ROM.

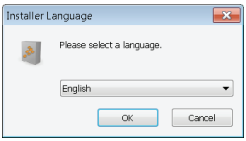
2.1 Installation on Windows

1 Insert the installation disc into the CD-ROM drive of your computer. The installation program will launch automatically. Or launch the installer that you have downloaded from the MixVibes website.

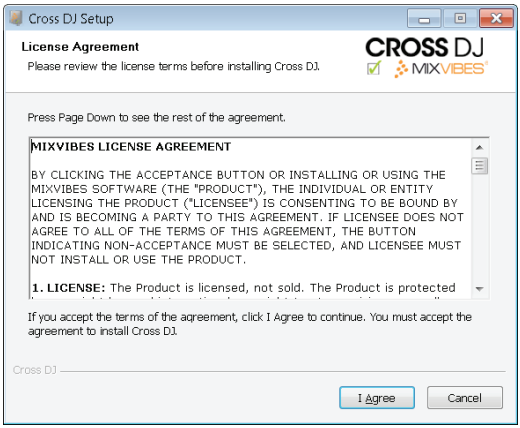
> **ATTENTION** Make sure that the hardware that was bundled with CROSS DJ/CROSS DJ LE (for example U-MIX CONTROL PRO, U-MIX CONTROL 2, or any other bundled controller or audio interface), is not connected during the installation. This ensures that the drivers are installed first, before Windows detects the device and performs the Plug&Play device installation. Without the drivers being installed first, Windows tries to search for drivers, which should be avoided as they are not installed yet.

If the installer does not start, open Windows Explorer, navigate to the CROSS DJ installation disc and open it. Double-click on **InstallCrossDJ.exe** to launch the installer manually.

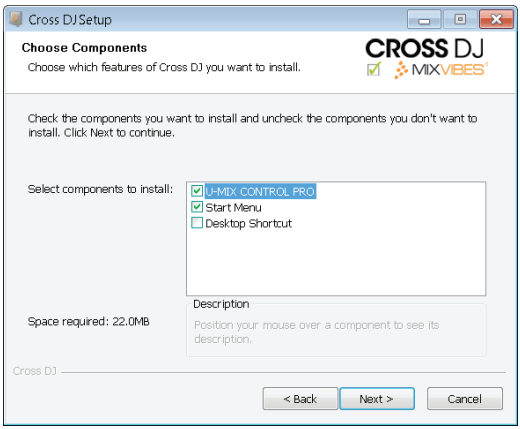
2 Select your language and click **OK**.



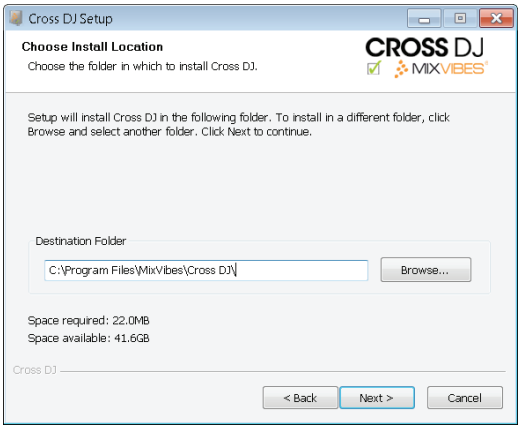
3 Read the License Agreement and accept it by clicking **I Agree**.


Cross DJ Setup
License Agreement
Please review the license terms before installing Cross DJ.
CROSS DJ
MIXVIBES
Press Page Down to see the rest of the agreement.
MIXVIBES LICENSE AGREEMENT
BY CLICKING THE ACCEPTANCE BUTTON OR INSTALLING OR USING THE MIXVIBES SOFTWARE (THE "PRODUCT"), THE INDIVIDUAL OR ENTITY LICENSING THE PRODUCT ("LICENSEE") IS CONSENTING TO BE BOUND BY AND IS BECOMING A PARTY TO THIS AGREEMENT. IF LICENSEE DOES NOT AGREE TO ALL OF THE TERMS OF THIS AGREEMENT, THE BUTTON INDICATING NON-ACCEPTANCE MUST BE SELECTED, AND LICENSEE MUST NOT INSTALL OR USE THE PRODUCT.
1. LICENSE: The Product is licensed, not sold. The Product is protected
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install Cross DJ.
Cross DJ
I Agree
Cancel

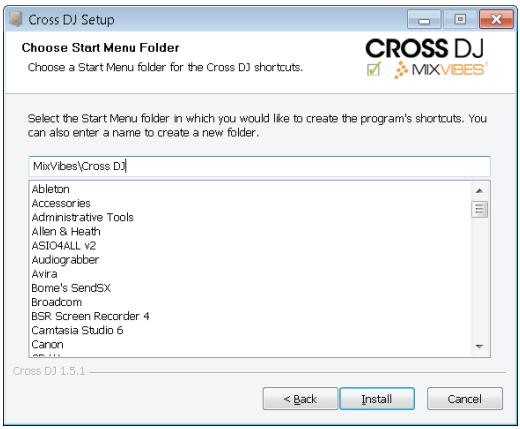
4 Select the Components you wish to install and click **Next**. Depending on the controller/software package that you use this setup screen may show different components. Make sure that the driver components for your controller stay selected.


Cross DJ Setup
Choose Components
Choose which features of Cross DJ you want to install.
CROSS DJ
MIXVIBES
Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.
Select components to install:
U-MIX CONTROL PRO
Start Menu
Desktop Shortcut
Description
Position your mouse over a component to see its description.
Space required: 22.0MB
Cross DJ
< Back
Next >
Cancel

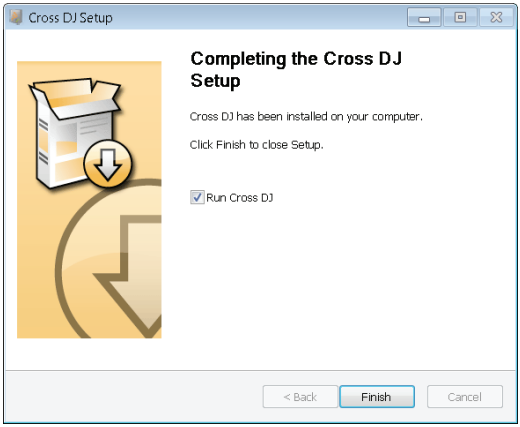
5 Select the folder where CROSS DJ shall be installed. Click **Next**.


Cross DJ Setup
Choose Install Location
Choose the folder in which to install Cross DJ.
CROSS DJ
MIXVIBES
Setup will install Cross DJ in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.
Destination Folder
C:\Program Files\MixVibes\Cross DJ\
Browse...
Space required: 22.0MB
Space available: 41.6GB
Cross DJ
< Back
Next >
Cancel

6 Select the folder in your Start menu where the CROSS DJ shortcut shall be created. Click **Install** to start the installation.



7 Once the installation is complete click **Finish**. If the checkbox **Run CROSS DJ** is activated, CROSS DJ will launch automatically.

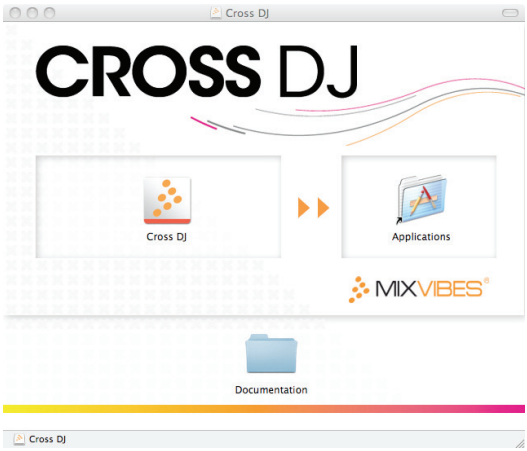


2.2 Installation on Mac OS X

1 Insert the CROSS DJ installation disc into the CD-ROM drive of your Mac.

2 Double-click the CROSS icon on your desktop.

3 Drag and drop CROSS DJ onto your "Applications" folder.



2.3 Launching CROSS DJ

If you use CROSS DJ LE that was bundled with a controller then connect the controller to your computer before you launch CROSS DJ LE. If the controller is not connected CROSS DJ LE will not start. If you use CROSS DJ it is not necessary to connect your controller before launching CROSS DJ.

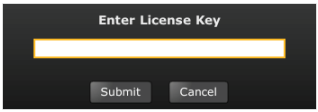
> **TIP** If you use the U-MIX CONTROL PRO controller/audio interface with CROSS DJ, then connect the controller before you launch the software. CROSS DJ supports the automatic audio configuration of U-MIX CONTROL PRO which means that you do not need to setup your audio routing manually.

Windows Go to **Start** → **All Programs** → **MixVibes** → **CROSS DJ** and click the CROSS DJ icon.

Mac OS X Go to **Applications** → **CROSS DJ** and double-click on CROSS DJ.

2.4 License Key

During the first launch of CROSS DJ you need to enter your license key in the following dialog box:



The license key can be found on the sleeve of your installation disc. Enter it and click **Submit**.

3/ Basic Concepts of Digital DJing

CROSS DJ is a extremely flexible DJ software that can be used in various setup scenarios. This flexibility can be a bit confusing at first sight. This chapter provides a general overview about some of the basic concepts and terms use in the world of digital DJing. If you are already familiar with digital DJing concepts you may wish to skip this chapter. If you are using a digital DJ setup for the first time, this chapter will help you to understand the different setup scenarios and audio routing options that CROSS DJ offers.

3.1 Internal Mixer vs. External Mixer

You can use CROSS DJ with either an external mixer or by using the internal mixer that is integrated into the CROSS DJ software. The main differences between these setups are

- whether the audio from the CROSS DJ players is mixed inside the internal software mixer or inside the external hardware mixer
- what audio signal is sent from CROSS DJ to the outputs of your audio interface.

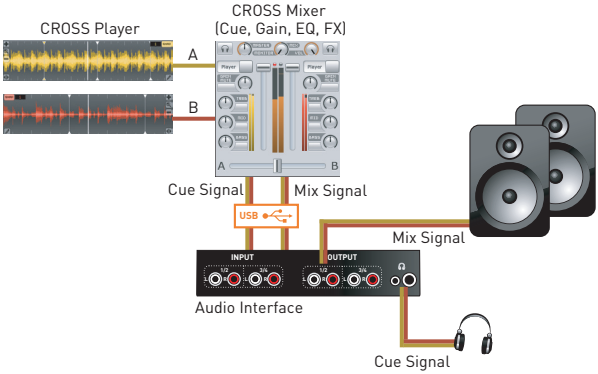
Internal Mixer Mode

In internal mixer mode the audio from both CROSS DJ players is sent to the internal software mixer in CROSS DJ. The internal mixer mixes the audio depending on the position of the volume fader of the players, on the equalization you have made and depending on the cue/headphone buttons of the players. Any audio changes resulting from activated FX will also be mixed into the signal.

After the internal mixing process CROSS DJ sends two audio streams to your audio interface: one stream contains the MIX/MASTER signal that shall be made publicly audible; the second stream contains the CUE signal that shall be audible in your headphones.

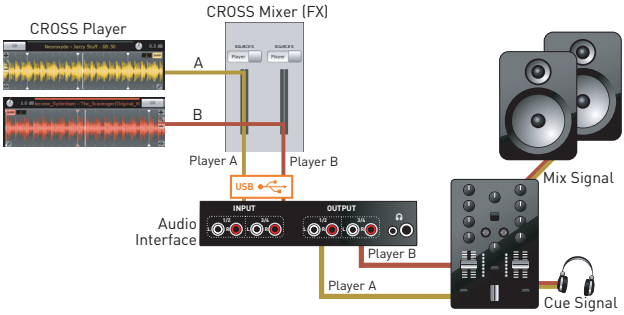
To get optimum results you will need an audio interface that has two stereo outputs. One of the outputs is used for the Mix, the other for the Cue signal. Because of the two stereo outputs needed this routing architecture is called Dual Stereo.

The signal flow in this routing mode is illustrated in the following graphics:



External Mixer Mode

In external mixer mode the mixing of the audio from the CROSS DJ players occurs inside the external mixer. For this configuration you need an audio interface with two stereo outputs, if you wish to be able to use the stereo signal each player provides. The signal flow for this setup is shown in the following image:



The audio signal from player A and player B runs through the mixer/audio engine of CROSS DJ but only to add the FX amount to the signal. Then the audio of each player is sent via the USB port to the connected audio interface: the audio signal of player A is sent to outputs 1 and 2, and the audio signal of player B is sent to outputs 3 and 4.

Each stereo output of the audio interface is connected with an RCA cable to the external mixer. You will then use the mixer to perform equalization and to mix the audio of both CROSS DJ players. The mix out signal of the mixer is sent to the

external speakers (or an amplifier) and the cue/headphone signal of the mixer sent to the connected headphone.

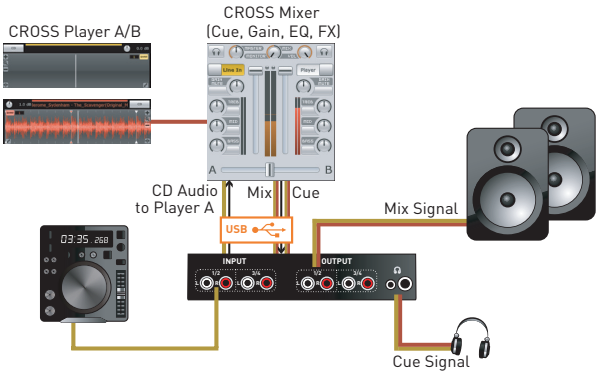
3.2 Audio Sources: Audio Files vs. External Sources

Both setup scenarios described above use media files (wav, mp3. etc) as the audio source. These files are loaded into the CROSS DJ players. Start the player to hear the track.

As well as using media files you can additionally use an external audio source in CROSS. These external audio sources can come from any device that delivers an audio signal: turntable, CD player, MP3 player such as an iPod™, an effect device and so on. To be able to use external audio sources your audio interface needs to be equipped with at least one input that you can connect the external source to.

U-MIX CONTROL PRO for example provides two stereo inputs that can be used to connect external devices and to integrate them into your setup. As CROSS DJ is built based on a two deck setup you can use a maximum of two external audio sources at the same time. The external devices are internally routed to one of the two CROSS DJ players.

The following figure illustrates the signal flow in internal mixing mode when using external audio sources.



In this example a CDJ player is connected to the inputs 1/2 of the audio interface. The input mode of player A (left part of the mixer panel) has been set to Line In. In this setting the audio coming from the CDJ player is routed into the CROSS DJ mixer and you can use the equalizer, the Cue button and the FX from player A to modify the incoming CD audio. Once the audio from the external source is inside the mixer the rest of the game is identical to using both players with media files:

the CROSS DJ mixer sends the Mix out signal and the Cue signal to the two output ports of your audio interface.

Of course, you can use external audio sources in external mixer mode as well. In external mixing mode the incoming audio is passed through to the audio interface output, making a little detour through the CROSS audio engine.

3.3 Controlling CROSS DJ with the Keyboard and DJ controllers

You can use CROSS DJ with the mouse alone. However this is not the quickest way to access all features. Things get much easier if you use a DJ controller.

If you bought the U-MIX CONTROL 2 or U-MIX CONTROL PRO package, a controller that is perfectly integrated with the CROSS software is part of the bundle. The difference between both controllers is that U-MIX CONTROL PRO is a hybrid controller with an integrated audio interface and U-MIX CONTROL 2 is a DJ controller only. Additionally, the jogwheels on the U-MIX CONTROL PRO are touch sensitive and the jogwheels on U-MIX CONTROL 2 are not. For the rest of the DJ controller section of both controllers is the same as you can see in the following pictures.

CROSS DJ LE can be bundled with controllers from various manufacturers. The layout of the controls on the controller may vary, but you will find controls that are needed to perform your set.

How does the CROSS DJ software know which action should be triggered when you press a button on the controller or when you turn a knob or move a fader? Every time you press a button on your controller, or move a knob or fader, the controller sends a message to the CROSS DJ software. These messages are called MIDI message as they use a protocol that is defined in the MIDI specification. MIDI is the abbreviation of Musical Instrument Digital Interface, an interface definition from the early 80s. The MIDI protocol is one of the components of the MIDI specification and defines the structure and content of communication between a MIDI sender (master) and a MIDI receiver (slave).

Whenever CROSS DJ receives a MIDI message, the software looks into a table that basically consists of two columns: one column contains information about the message and the second column contains information about the action, that shall be triggered when that message is received. If there is a match between the incoming message and a row in the table, the corresponding action is triggered.

The whole process of connecting a MIDI message to an action is called mapping. The term mapping, or better controller mapping, is also used for these "tables" explained above. The tables contain the information of how one particular controller is mapped to the action that CROSS DJ provides.

You can have a look at these mappings in all different CROSS DJ versions. However, these mappings can only in CROSS DJ be changed. In CROSS DJ LE you need to use the mappings as they are provided, as you cannot modify them.

The same mapping concept is also used for the keyboard as well. CROSS DJ contains a standard mapping for your keyboard. It allows access to the most important actions. You will learn most of the keyboard shortcuts in the following chapters of this manual.

4/ Connect and Configure your Hardware

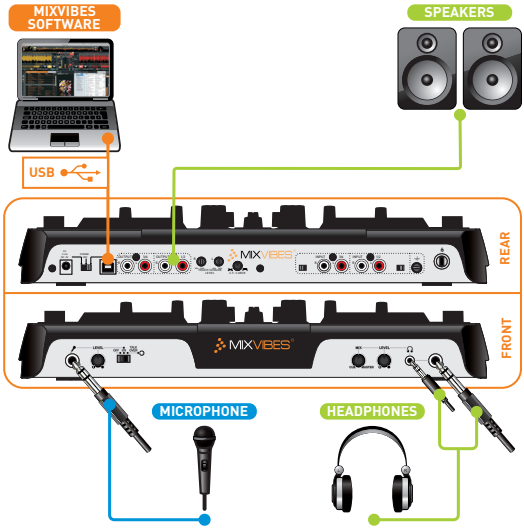
This chapter explains how to connect your different hardware components. The steps you need to perform depend on whether you use a controller, which one and if you wish to use CROSS DJ in internal or external mixer mode. Also dependant is if you wish to use external audio sources like a turntable, a CDJ player or an MP3 player with your audio files on your computer

In its default setting CROSS DJ will configure all MixVibes audio interfaces automatically when they are plugged in. You can find the corresponding option **Auto-select MixVibes devices at startup** on the **Preferences/Audio** dialog. If you have multiple MixVibes audio interfaces CROSS selects them in the following: U46MK2, U-MIX44 and U-MIX CONTROL PRO.

4.1 U-MIX CONTROL PRO in Internal Mixer Mode

The U-MIX CONTROL PRO hybrid controller has an integrated audio interface with two stereo outputs. One of the outputs is used for the Mix Out signal, the other one is used for the Headphone/Cue signal.

1. Use the RCA cable and connect outputs 1/2 of your U-MIX CONTROL PRO to the sound system (amplifier, powered speakers, or home stereo).
2. Connect your headphones to one of the Headphones sockets on the front panel of your U-MIX CONTROL PRO.



3 If you wish to use a microphone connect it to the Microphone input on the front panel of your U-MIX CONTROL PRO.

4 Connect the U-MIX CONTROL PRO with the USB cable to your computer.

5 Switch the U-MIX CONTROL PRO on by setting the On/Off switch at the rear panel of the controller to USB. If you are using Windows and if this is the first time you have switched the controller on, please wait until the necessary drives are installed.

6 Launch CROSS DJ.

7 Open the **File** menu and click **Preferences**. Click the **Audio** tab to open the audio settings panel. Here you can configure your audio settings.

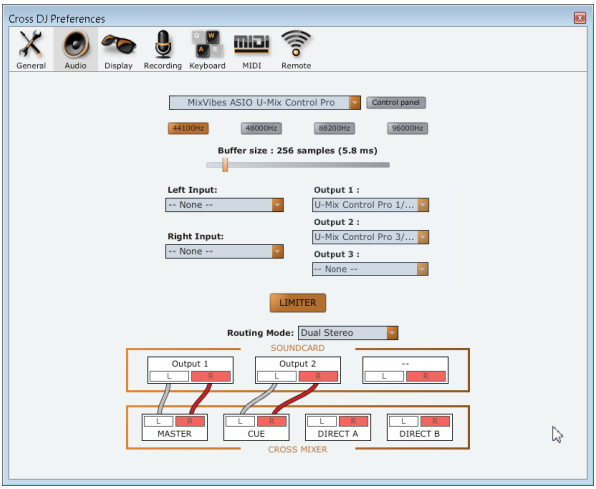
8 Open the upper list box Audio Device and select **MixVibes ASIO U-MIX CONTROL PRO**. You can leave the settings for sample rate and buffer size at their default values.

9 Open the list box **Routing Mode** and select **Dual Stereo**. This routing option is to be used for internal mixing mode and if you use an audio interface with two stereo outputs.

10 Open the list box **Output 1**. On Windows select **U-Mix Control Pro 1/U-Mix Control Pro 2** and on OS X select **output 1/2**, if these outputs are not already selected. This output receives the Master out signal.

11 Open the list box **Output 2**. On Windows select **U-Mix Control Pro 3/U-Mix Control Pro 4** and on OS X select **output 3/4**, if these outputs are not already selected. This output receives the Cue/Monitor signal.

The routing image in the lower part of the dialog shows the how the audio is routed from the CROSS mixer to your audio interface. The Audio panel should look as shown in the following figure:



4.2 U-MIX CONTROL PRO in External Mixer Mode

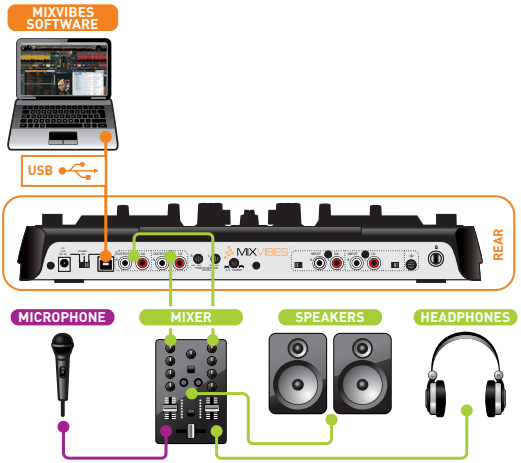
If you have an external mixer you can use this mixer to mix the audio coming from the two CROSS players. The mixer section of the U-MIX CONTROL PRO controller is disabled in this setup. However, all other controls of the controller are available to add FX or to use locators, for example. The following steps explain how to connect the components and how to configure the audio routing in CROSS.

1 Use an RCA cable and connect outputs 1/2 of your U-MIX CONTROL PRO to Line input 1 of your mixer.

2 Use another RCA cable and connect outputs 3/4 of your U-MIX CONTROL PRO to a Line input 2 of your mixer.

3 Connect your headphones to the Headphones sockets on your mixer.

4 If you wish to use a microphone connect it to the Microphone input on your mixer.



5 Connect the U-MIX CONTROL PRO with the USB cable to your computer.

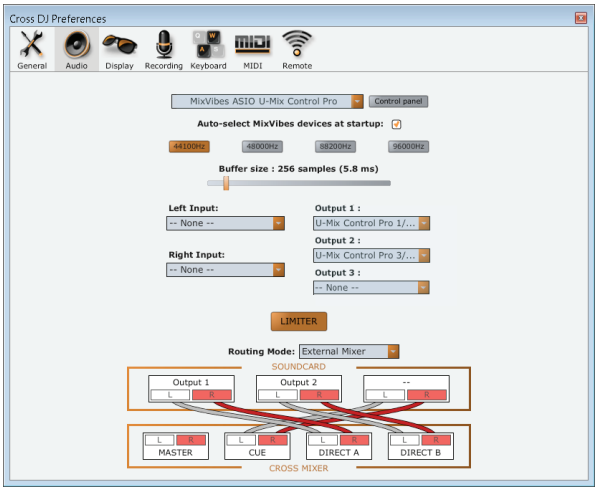
6 Switch the U-MIX CONTROL PRO on by setting the On/Off switch at the rear panel of the controller to USB. If you are using Windows and if this is the first time you have switched the controller on, please wait until the necessary drives are installed.

7 Launch CROSS DJ.

8 Open the **File** menu and click **Preferences**. Click the **Audio** tab to open the audio settings panel. Here you can configure your audio settings.

9 Open the upper list box Audio Device and select **MixVibes ASIO U-MIX CONTROL PRO**. You can leave the settings for sample rate and buffer size at their default values.

10 Open the list box **Routing Mode** and select **External Mixer**. Take a look at the diagram in the lower part of the dialog box. You can see that the CROSS MIXER connects DIRECT A, i.e. the output of Player A, to Output 1 of your soundcard. DIRECT B is connected to Output 2.



11 Open the list box Output 1. On Windows select U-Mix Control Pro 1/U-Mix Control Pro 2 and on OS X select output 1/output 2. This output receives the signal from player A.

12 Open the list box **Output 2**. On Windows select **U-Mix Control Pro 3/U-Mix Control Pro 4** and on OS X select **output 3/output 4**. This output receives the signal from player B.

4.3 U-MIX CONTROL PRO and External Audio Sources

It is very easy to integrate external audio sources into your CROSS DJ setup. An internal audio source can be a turntable, a CD player, an MP3 player or any other device that provides a line level audio signal. You need an audio interface that has at least one input; otherwise it is not possible to use external audio sources.

To configure external audio sources three steps need to be done:

- Make the cable connection and configure the input mode of your audio interface input port
- Route the external audio source into the CROSS DJ software mixer
- Assign the inputs to the players
- Set the player input mode to Line In

ATTENTION Before proceeding with the configuration of external audio sources make sure that you have configured CROSS for either internal or external mixer mode as explained in the previous section..

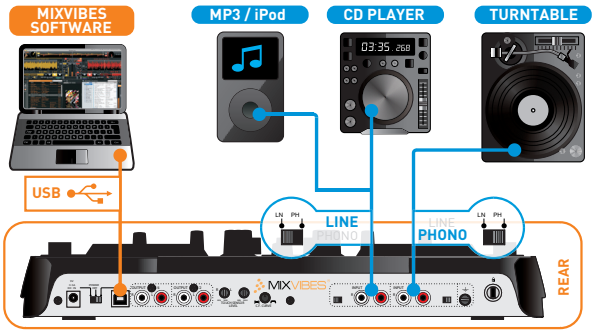
Making the Cable Connections

The following steps explain how to connect the different components.

1 If you wish to connect a turntable, connect the ground of your turntable to the ground lug on the U-MIX CONTROL PRO.

2 Connect the outputs of your external audio source to the RCA inputs of your U-MIX CONTROL PRO. Plug the left device into inputs 1/2 and the right device into inputs 3/4.

Make sure that the left channel (plug is white normally) is connected to the white RCA sockets on the U-MIX CONTROL PRO, and that the right channel (usually red) is connected to the red sockets.



3 Perform one of the following actions:

- **Turntable with Phono Output** Set the input selector for the inputs where the turntable is connected to, to PHONO.
- **Turntable with Line Output, CDJ Player, MP3 Player** Set the input selector for the inputs where the Line device is connected to LINE.

Routing External Audio into the CROSS DJ Mixer

Once your external audio source is connected to your audio interface you need to tell CROSS DJ, which input port of your audio interface shall be assigned as Left Input and as Right Input.

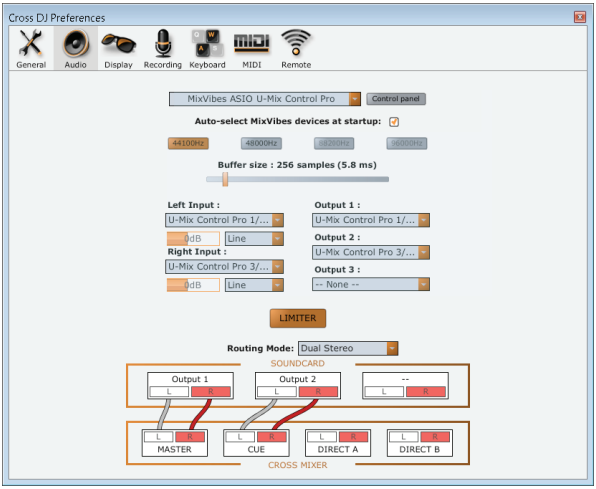
1 Open the File menu and click on Preferences. Open the Audio tab of the CROSS Preferences dialog.

2 Open the list box **Left Input** and select the input ports of your audio interface to which the external device is connected.

If you use U-MIX CONTROL PRO select **U-Mix Control Pro 1/U-Mix Control Pro 2** on Windows or select **input 1/input 2** on OS X.

3 Open the list box **Right Input** and select the input ports of your audio interface to which the external device is connected.

If you use U-MIX CONTROL PRO select **U-Mix Control Pro 3/U-Mix Control Pro 4** on Windows or select **input 3/input 4** on OS X.



4 Open the **Line/Phono** dropdown list in section **Left Input** and/or section **Right Input**. Select **Line**, if you connect a line-level device or select **Phono** if you connect a turntable without a pre-amplifier.

5 Use the **Input Gain** sliders next to the **Line/Phono** dropdown list to adjust the input gain for your audio device. Make sure that the input level is high enough but also that the audio clipping is avoided. Setting the input gain is especially useful if you connect an MP3 player like the iPod.

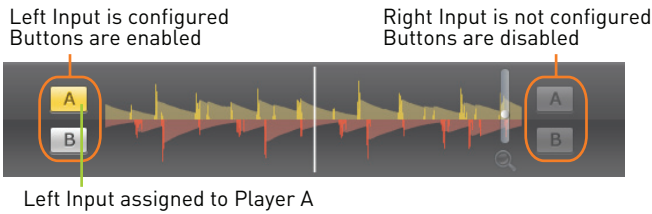
Assign the Inputs to the Players

Once you have configured the routing for the Left Input and the Right Input as described in the previous section, have a look at the Head-Up Display and especially at the A/B buttons at the left and the right side of the waveforms.

If you assigned inputs of your audio interface to the Left Input dropdown, then the A/B buttons on the left side of the waveform are enabled; otherwise they will be

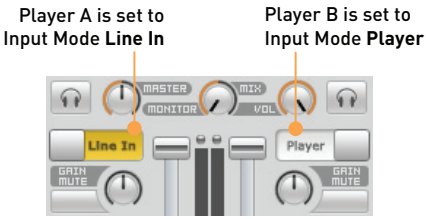
disabled. The same is true for the **Right Input** dropdown and the A/B buttons on the right side of the waveform.

If the buttons are enabled, you can use them to assign the Left Input and/or the Right Input to either player A or player B by clicking the corresponding buttons. The following image shows an example, where only the Left Input channels of the audio interface were routed. Also the Left Input was assigned to player A.



Setting the Player Source to Line In

The last step that needs to be done is to set the Input Mode of the CROSS DJ player to Line In, if you wish the external audio source to be heard through the player/mixer. The input mode button can be found on the Mixer panel above the equalizer/gain knobs.



You can set the input mode to Player or to Line In.

- **Player** When the input mode is set to Player the audio from the media file is sent to the CROSS mixer.
- **Line In** When the input mode is set to Line In, the external audio signal is sent to the CROSS DJ mixer. Which of the external inputs is sent to either player A or B depends on the selection you made in the Head-Up Display (see previous section).

If you use either U-MIX CONTROL PRO or U-MIX CONTROL 2 you can set the input mode on the controller by holding the **Shift** button and pressing the **Headphones/Source** button.

4.4 Configuring other Soundcards

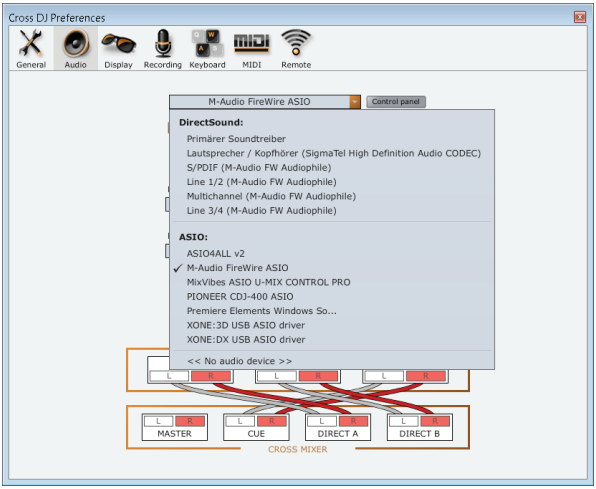
If you use any audio interface other than the U-MIX CONTROL PRO this section will provide all the information that is necessary to get your soundcard up and running with CROSS DJ.

In general you can use any soundcard with CROSS DJ. However, using a soundcard that has at least two stereo outputs gives the best results and a better experience. If you wish to integrate external audio sources, like a turntable, CD player, MP3 player etc into your setup, then you will need an audio interface that has one stereo input for each device you wish to connect.

1. Connect your equipment (audio interface, speakers/amplifier, headphones) by performing one of the following actions:
   - If you use CROSS DJ in internal mixer mode connect the speakers/your amplifier and your headphones to the corresponding outputs of your audio interface. Some DJ audio interfaces have a designated headphone output, sometimes you can assign one of the available outputs as the headphone output. Please consult the manual of your audio interface for more information.
   - If you use CROSS DJ in external mixer mode connect each stereo output of your audio interface to a stereo input of your mixer.
2. If you wish to integrate external audio sources, like a turntable, a CD player or an MP3 player, into your setup, perform the following actions:
   - Connect the components you wish to use to the inputs of your audio interface.
   - If you are using a turntable that provides a Phono level signal and if your audio interface has a switch to toggle the input between Phono and Line, make sure that the switch is set to Phono.
3. Open the **File** menu and click on **Preferences**. Open the **Audio** tab of the CROSS DJ Preferences dialog.

4. Open the **Audio Device** dropdown list and select the audio interface/driver that CROSS shall use.

Windows If you are running CROSS DJ on Windows, the dropdown list shows all audio drivers installed on your computer, even when the audio interface is not currently connected.



The dropdown list on Windows contains two sections. One section is labelled DirectSound and the other second one, ASIO. Two drivers are often installed for the same audio interface; one using the ASIO protocol and the other one using the DirectSound driver architecture. If both drivers are available you should use the ASIO driver as ASIO drivers generally offer better performance than DirectSound drivers (see sidebar on page 29).

TIP If no ASIO driver for your audio interface is available you can use the ASIO4ALL driver as an alternative. ASIO4ALL is a hardware independent low latency ASIO driver for Windows audio devices and acts as a layer between the DirectSound driver and the audio application, which here is CROSS DJ. Once you have installed ASIO4ALL you need to configure the driver and tell it, which Windows audio drivers it shall use. Then you should select the ASIO4ALL driver in the CROSS audio setup.

Using ASIO4ALL can lead to better audio performance, to a lower latency time and can help to avoid clicks and pops. Even though a guarantee cannot be given, checking ASIO4ALL is definitely worth while.

Please note that the latency time when using ASIO4ALL is always greater than with a generic ASIO driver because the audio data from CROSS is first sent via the ASIO protocol to ASIO4ALL and then via the WDM protocol to the audio interface. For this reason using ASIO4ALL should be seen more as a workaround.

OS X If you are running CROSS DJ on OS X only the currently available and connected audio interface is shown. All drivers you see in the list are Core Audio drivers.

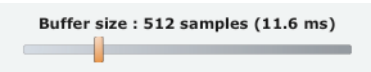
5 Click the **Sample Rate** button with the sample rate you wish to use.

The default setting is 44.1 kHz, which is the same sampling rate used by audio CDs. In most cases this default setting is acceptable.

By changing the sample rate you instruct CROSS DJ that all audio data it sends to your audio interface has to be at the selected sample rate. This means that even compressed audio file formats (like MP3), need to be re-sampled by CROSS DJ before the audio is sent to the outside world.

Even if you only use standard WAV files that have a sample rate of 44.1 kHz the sound will not be improved if you change the sample rate to 88.2 kHz, for example. However, if you use your own audio material that has a higher sample rate, it makes sense to change the sample rate that CROSS will use.

6 Use the slider **Buffer size** to change the latency time of your audio interface. The default buffer size is 256 samples.



The latency time is a measure of the time it takes until an action in CROSS DJ (like jumping to a locator) is audible. Generally speaking a latency time around 10 milliseconds is considered an adequate and decent value.

> **TIP** If you hear clicks and pops in the audio output of CROSS DJ or if the audio output is interrupted then in most cases the solution is to increase the latency time. Why this helps and the reasons for the distortions are explained in the sidebar on page 29.

7 If you are using external audio sources open the list boxes **Left Input** and **Right Input** and select the inputs of your audio interface that the devices are connected to.

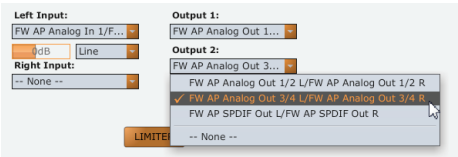
Once you select an input port you will see a slider that you can use to change the input gain of that input, and a list box to select whether a Phono level or a Line level device is connected.

8 Open the list **Output 1** and perform one of the following actions:

- If you use CROSS DJ in external mixer mode select the outputs of your audio interface where CROSS DJ shall send the audio from player A to.
- If you use CROSS DJ in internal mixer mode select the outputs of your audio interface where CROSS DJ shall send the Master/Mix signal to.

9 Open the list **Output 2** and perform one of the following actions:

- If you use CROSS DJ in external mixer mode select the outputs of your audio interface where CROSS DJ shall send the audio from player B to.
- If you use CROSS DJ in internal mixer mode select the outputs of your audio interface where CROSS DJ shall send the Cue/Headphone signal to.


Left Input:
FW AP Analog In 1/F...
dB
Line
Right Input:
-- None --
Output 1:
FW AP Analog Out 1...
Output 2:
FW AP Analog Out 3...
FW AP Analog Out 1/2 L/FW AP Analog Out 1/2 R
FW AP Analog Out 3/4 L/FW AP Analog Out 3/4 R
FW AP SPDIF Out L/FW AP SPDIF Out R
-- None --
LIMITE

The outputs available in the list boxes depend on the audio interface/driver that you selected in step 4. The screenshot above uses an M-Audio Firewire soundcard as an example.

10 Use the button **LIMITER** to enable/disable the software limiter inside CROSS.

The limiter ensures that the level of the audio signal never exceeds a particular value. This is to avoid clipping.

11 Open the **Routing Mode** list box and select the routing mode you wish to use.

CROSS provides four different routing modes where each option supports a different usage scenario:

- **Dual Stereo** Use this option if you have an audio interface with two stereo outputs and if you wish to use the internal CROSS DJ mixer. One output is used for the Master/Mix out signal; the other one is used for the Cue/Headphone signal.
- **External Mixer** Use this option if you use CROSS DJ in external mixer mode. In this mode the output of each CROSS DJ player is sent to a dedicated output on your audio interface.
- **Simple Stereo** In this mode the sum of the Master and Cue/Monitor signals are routed to one output on your audio interface. You can use this option when using an audio interface with only one output (normally the internal soundcard of your laptop).
- **Split Mono** Use this option if you have one stereo output. This is usually the case with almost all soundcards that are integrated in laptops. CROSS DJ sends the Master/Mix out signal to the left channel of the output and the Cue/Headphone signal to the right channel of the output. You get two mono signals in this configuration but you are still able to use the cue/monitor feature of CROSS DJ.

> **NOTE** When using routing mode **Split Mono** or **Simple Stereo** you only need to perform step 9 (setting output 1), as with both routing modes, only one output is needed.

Sidebar: ASIO, Latency and Buffer Size

As a general rule the lower the latency time, the better. But: a low latency time can cause some issues. One is caused by the method by which the audio data is sent from the application (in our case CROSS DJ) to the audio interface (to be more precise: to its digital-to-analogue converter, which transforms the audio data into audible sound).

To guarantee a continuous data stream the audio drivers provide a data buffer. CROSS DJ writes the generated audio data into this buffer. The audio driver then transfers the received data to the audio interface hardware and the hardware makes the data audible. To achieve a lower latency the data buffer needs to be as small as possible. With a small buffer the amount of audio data is very small and CROSS needs to update the data buffers more often to make sure that the data stream is not interrupted.

The buffers need to be refreshed very rapidly after each action that is performed in CROSS DJ, and the result of this action is audible because of the small size of the buffers.

However, the problem here is that CROSS DJ needs to share the processor time with other applications and the operating system. If CROSS DJ cannot update the data buffers quickly enough the data stream is interrupted. This can lead to either, disturbing clicks and popping noises or in the worst case to real "holes" in the audio signal. And: a smaller buffer results in a higher CPU load because CROSS DJ needs to write data into the buffers more frequently.

When larger data buffers are used, the clicks and pops disappear; the disadvantage is that this also increases the latency. Because of the larger buffers, it takes more time for CROSS DJ to write new audio data into the buffers (i.e. until the data in the buffers is "consumed").

The actual latency time is also dependant on the buffer size and the number of operating system layers the audio data needs to walk through until it reaches the audio interface hardware. Mac users do not need to worry about this. The Core Audio drivers were originally designed in a way that their latency time is quite small.

To overcome these latency and other issues with earlier Windows audio drivers (and as a way to improve sale of their own products) German company Steinberg developed the ASIO protocol (Audio Stream Input/Output), which in 1997 became an open standard, whereby other manufacturers could develop hardware and drivers that used this protocol. The main goals for the development of ASIO were to give applications direct access to the input and output functions of the audio interface and so to avoid the need for data to be transported via several layers in the operating system first. This results in a better data throughput and in a decrease in latency time. At the same time ASIO removed the previous restriction that only one stereo output and one stereo input could be used and made it possible to create and support audio interfaces with several inputs and outputs.

4.5 Using the MIDI Presets for DJ Controllers

CROSS DJ/CROSS DJ LE come with many MIDI presets which allow you to control the software from your DJ controller.

If you use CROSS DJ with U-MIX CONTROL PRO or U-MIX CONTROL 2 make sure that the controller is connected before you launch the application. During start-up CROSS DJ will detect the controller and its MIDI preset is activated automatically.

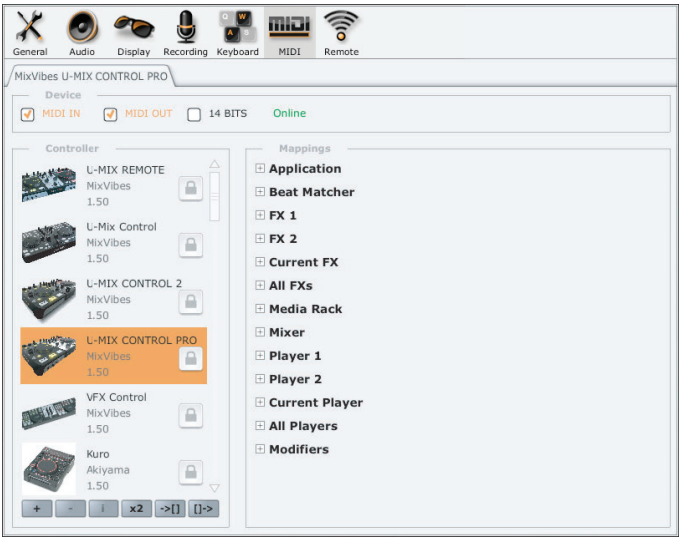
CROSS DJ LE automatically checks if the bundled controller is connected. If the bundled controller cannot be found, CROSS DJ LE cannot be launched. Otherwise CROSS DJ LE will automatically activate the mapping for the controller.

If you use any other controller, please connect it to your computer before launching CROSS DJ. Once you see the main window perform the following steps to assign the MIDI port of your controller to one of the MIDI presets:

1 Open the **File** menu and click **Preferences**. Click **MIDI** to open the **MIDI** tab. For each MIDI port/controller CROSS DJ could detect, you will see a tab with the controller name/port name at the top of the panel.

2 Click the tab with the controller name/port name, for which you wish to assign a MIDI preset.

3 Scroll through the list **Controller** and click the MIDI preset you wish to assign. The following image shows an example with one detected controller (here MixVibes U-MIX CONTROL PRO). This controller is assigned to the MIDI preset with the same name.



4 Repeat steps 2 and 3 if you wish to use more than one controller.

MIDI Presets Documentation

To have the documentation of the MIDI preset at your fingertips you can print the corresponding PDF file. On Windows browse to the folder with the CROSS DJprogram files and open the subfolder **Documentation\MIDI Controllers**. Search for the PDF file with your controller.

On OSX the PDF files are not installed by default. To access them insert your CROSS DJ installation disc into the CD ROM drive. Double-click the CROSS icon on your desktop. Finally open the **Documentation/MIDI Controllers** folder on the installation disc and all available PDF files are shown.

All PDF files are also available on the MixVibes website (www.mixvibes.com). Open the page **Documentation** in section **Support and Downloads** for the CROSS DJ product.

4.6 Defining your own Presets and Controls

The standard MIDI presets, also called controller mappings, that come with CROSS DJ cannot be changed. Presets that cannot be changed are marked with the lock icon in list **Controller** (see previous page).

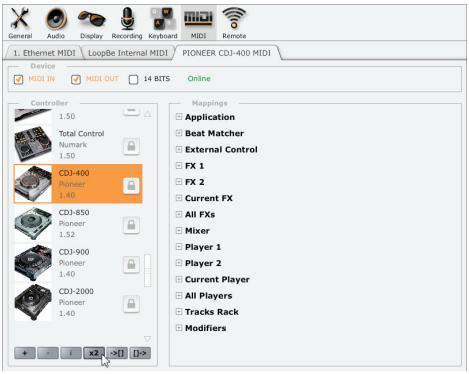
However, you can create a duplicate of a standard MIDI preset and then use this duplicate to make your own changes, such as deleting and adding controls. If there is no MIDI preset available for the controller you wish to use, you can create your own, or you can import a MIDI preset that another CROSS DJ DJ has shared on the MixVibes Forum.

> **NOTE** In CROSS DJ LE it is not possible to change or edit the MIDI presets; you can use the supplied preset only. Therefore the **Preferences** dialog in CROSS DJ LE does not provide a **MIDI** tab.

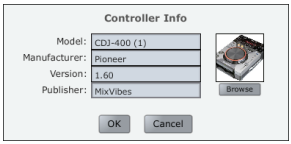
Creating a Duplicate of a MIDI Preset

Perform the following steps to create a duplicate of one of the standard MIDI presets:

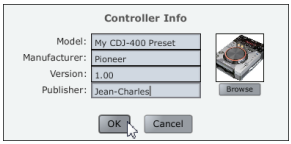
1. Open the **File** menu and click **Preferences**. Click **MIDI** to open the **MIDI** tab.
2. Click the tab with the controller name/port name of the controller, which MIDI presets shall be duplicated.
3. Scroll in list **Controller** and select the MIDI preset you wish to duplicate.
4. Click the button **Duplicate Controller Mapping** at the bottom of the **Controller** list.



CROSS DJ show the **Controller Info** dialog.

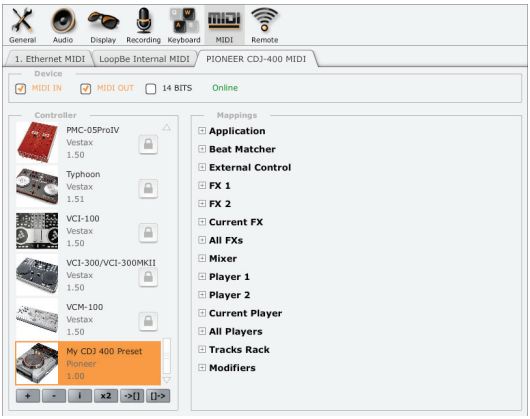


5 Enter a name for the MIDI preset, like "My CDJ 400 Preset". Change the version number and the author name in the two text boxes in the lower part of the dialog. If you wish to change the icon for the duplicated preset, click **Browse**, open the folder with the image file and click **Open**.



Finally click **OK.**

6 The duplicated preset is added to the end of list **Controller**. You can now change and edit the mapped controls (see section "Editing a MIDI Preset" below).



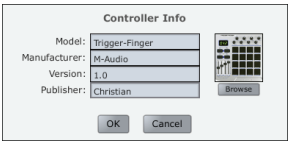
TIP If you wish to change the controller information, select the preset in list Controller and click the button **Edit Controller Info**.

Creating a new MIDI Preset

If there is no default MIDI preset available for the controller you wish to use, you can create your own. First add an empty mapping (this section) and then add the controls to this mapping (next section). Perform the following steps to create a new controller mapping:

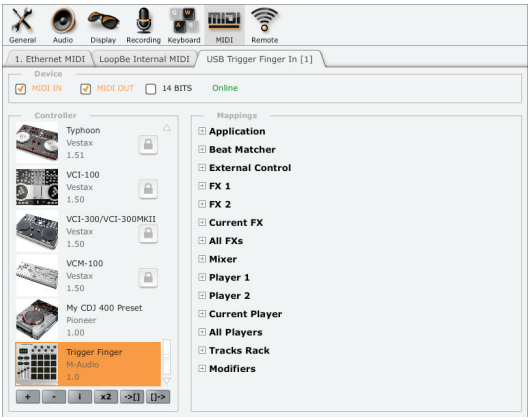
1. Open the **File** menu and click **Preferences**. Click **MIDI** to open the **MIDI** tab.
2. Click the tab with the controller name/port name of the controller, which MIDI presets shall be duplicated.
3. Click the button **Add Controller Mapping** at the bottom of the **Controller** list. CROSS DJ opens the **Controller Info** dialog.

4. Enter a name for the MIDI preset, like "Trigger Finger", change the version number and the author name in the two text boxes in the lower part of the dialog. If you wish to change the icon for this controller mapping, click **Browse**, open the folder with the image file and click **Open**.



Finally click **OK.**

5 The new controller mapping is added to the end of list **Controller**.

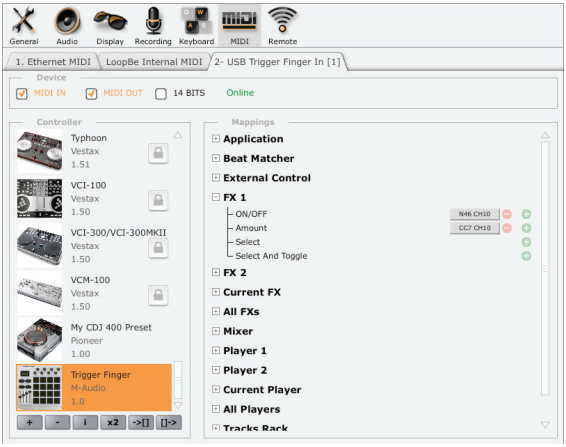


You can add controls to your new mapping (see section "Editing a MIDI Preset" below).

Editing a MIDI Preset

Each MIDI preset/controller mapping consists of one of more controls. A control is a function of CROSS DJ that can be controlled with a MIDI controller. All available controls are grouped by the function categories that are shown in list **Mappings** of the **Preferences/MIDI** dialog. You can open a category by clicking the **Plus** button in front of the category name.

Inside each category you can see the controls that can be mapped to the buttons, faders and knobs of your controller. In the following image the category **FX 1** is opened. FX 1 refers to the FX unit of player A. There are four different controls that you can assign to your controller, like ON/OFF and Amount for example.

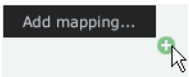


The control ON/OFF has been assigned to the controller. A grey button shows information about the MIDI message that the button on the controller sends to CROSS DJ. You can click this button to change the assignment between the control and the button/knob/fader on your controller. At the very right you can see buttons with a Minus sign and a Plus sign. Clicking the **Minus** button remove the mapping for a control; clicking the **Plus** button opens a dialog where you can create a new mapping.

Let's have a look at some examples that will explain the basic steps and the different options for mapping a control.

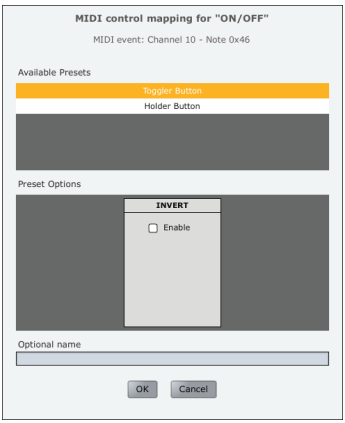
1 Click the **Plus** button before the category with the control that you wish you map. For this example open category **FX 1**.

2 Click the **Add mapping** button next to **ON/OFF**. The MIDI control mapping windows is opened.



3 Press/move the MIDI button/MIDI control that you want to assign to FX1 | ON/OFF. CROSS DJ receives a MIDI event from your controller.

In section **MIDI event** you can see information about the MIDI event that was received. In this example we have pressed a button. Buttons normally send Note messages (here 0x46; the prefix 0x is shown as the shown number is a hexadecimal value). MIDI events are sent on a particular MIDI channel; in this example the controller was configured to send its messages on channel 10.



Now have a look at section **Available Presets**. For an event that was triggered by a button and that is mapped to a CROSS DJ control with On/Off states, CROSS DJ provides two different presets. You can select one of the

available presets to define how CROSS DJ shall react when this MIDI event is received. If you choose **Toggler Button** then this event toggles the state of the mapped control: if the current status is OFF the status will be set to ON; if the current status is ON then pressing the mapped button will set the state to OFF.

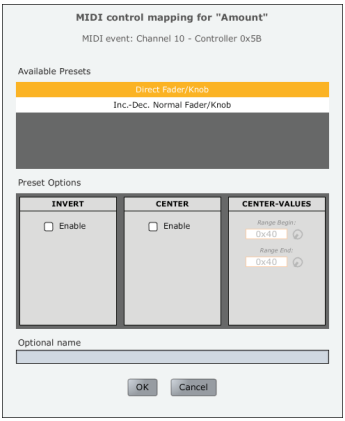
If you choose **Holder Button**, then the status of the control will change as long as the mapped button is held.

Additionally you can activate the **Invert** check box in section **Preset Options**. If you have mapped a control as a Holder Button, the mapped feature is On while the mapped button is held. However, if Invert is activated, the mapped feature is Off, while the mapped button is held.

4 Click **OK** to add the mapping to the MIDI preset.

5 Click the **Add mapping** button next to **Amount**. The MIDI control mapping windows is opened.

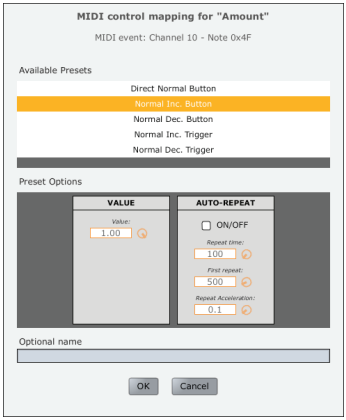
6 Move a fader or a knob on your controller and have a look at the available options.



For controls that are used to set a CROSS DJ control to a particular value and where a fader or a knob is moved, the MIDI control mapping windows offers the presets **Direct Fader/Knob** and **Inc.-Dec Normal Fader/Knob**. In general you should use **Direct Fader/Knob** for faders and knobs with a defined start and end point and you should use **Inc.-Dec Normal Fader/Knob** for endless encoders.

In section **Preset Options** you see the **Invert** option that you know already from the first example. Use **Invert** for faders and knobs if you wish to invert the meaning of the left/right or up/down movement or position of the MIDI control.

7 For controls like Amount that set a value, not only faders and knobs but buttons can be used if you wish to set the value stepwise. Make sure that the MIDI control mapping dialog for the Amount control is still open and press a button on your controller. The available **Preset Options** change as shown in the following figure:



Use the preset **Direct Normal Button** if you wish to set the control to a particular value. Use the Value field in section Preset Option to define the value in the range from 1 to 100.

Use the preset **Normal Inc. Button** or **Normal Dec. Button** if you wish to change the value stepwise. Using **Normal Inc. Button** increases the value and **Normal Dec. Button** decreases it. Then enter the step size into the field **Value**. The step size can be in the range from 0.00 to 1.00. Additionally you can activate the AUTO-REPEAT option, if you want the value to be decreased/increased not just once, but for as long as the mapped button is held.

The two presets **Normal Inc. Trigger** and **Normal Dec. Trigger** lead to the same result as using the corresponding button presets. However, for a control mapped to a Trigger function no Auto-Repeat options are not available.

8 Now open the category **Application** and click the **Add Mapping** button next to **Activate Next Player**. Activate Next Player can be used to set the input focus to one of the players. All commands that are mapped in the category **Current Player** are sent to the player that is currently active.

9 Press a button on your controller and take a look at the available presets.

Some of the controls do not have an On/Off state, like the **FX On/Off** control you saw earlier. They are used only to trigger an action, like setting the input focus as Activate Next Player does. For these controls the presets **Trigger Button** and **Trigger Note** are available. If you use the preset **Trigger Button** you can activated the **Auto-Repeat** option as shown in the previous image. For the **Trigger Note** preset this option is not available.

This ends the introduction into how to map your own controls.

Importing a Mapping

If you have found a MIDI preset for your controller on the MixVibes forum or if you received one from another CROSS DJ user, perform the following steps to import the mapping.

1. Open the **File** menu and click **Preferences**. Open the **MIDI** tab on the **Preferences** dialog.

2. Select your MIDI device by clicking on its tab.
3. Click the **Import Controller Mapping** button in the lower part of the **Controller** list.

4. Browse to the folder with the mapping file (file extensions .mappings, .mappings.xml), select the file you want to import and click **Open**.
5. Assign the imported mapping to the MIDI device by clicking the picture of the mapping in list **Controller**.

Exporting a Mapping

If you created amapping for a controller and wish to share it on the MixVibes forum, perform the following steps to export the mapping into a file that can be uploaded.

1 Open the **File** menu and click **Preferences**. Open the **MIDI** tab on the **Preferences** dialog.

2 Select your MIDI device by clicking on its tab.

3 Click the **Export Controller Mapping** button in the lower part of the **Controller** list.

4 Browse to the folder where you want to save mapping file (file extensions .mappings) and click **Save**.

4.7 Using the Keyboard

If your DJ controller is not currently available or if you are preparing tracks or playlists you can use your keyboard to access many of the CROSS DJ features. CROSS DJ includes a keyboard mapping that is automatically activated when you launch the software. Please have a look at the tables on page 104 and onwards for a complete overview of the integrated shortcuts.

Player related shortcuts

Many of the keyboard shortcuts control the features the two players but only one keyboard shortcut has been assigned. In these cases the mapped command is sent to the currently active player. Please have a look at the yellow and red bar respectively, that is visible above the track title if that player is active.

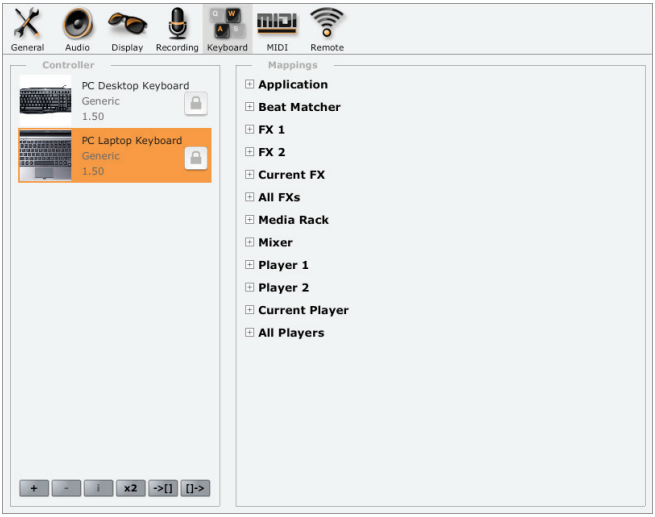
You can toggle the active status of the player by pressing the ⇆ key.

Defining your own Shortcuts

If you wish to access a CROSS DJ feature for which a shortcut is not included in the default mapping, you can define the shortcut yourself. This example shows how to define a shortcut for the Kill Bass feature in the mixer.

1 Open the **File** menu and click on **Preferences**. Click the **Keyboard** tab.

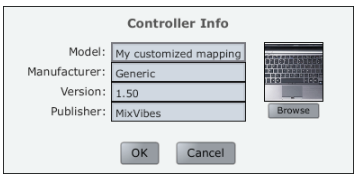
The **Controller** list shows all keyboard mappings that are available. Please note the Lock icon, it indicates that the mapping is embedded and cannot be changed. The **Mappings** list shows the different command categories that can be assigned.



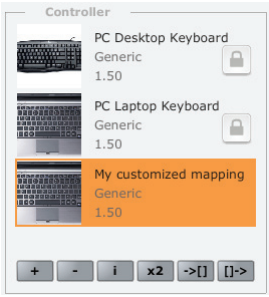
As we wish to add two new keyboard shortcuts to an existing mapping the easiest way is to duplicate an existing mapping and make the desired changes there.

2 Click the **Duplicate Controller Mapping** button in the lower part of the **Controller** list. The **Controller Info** dialog becomes opened.

3 Enter a descriptive text into the **Model** field and click **OK**.



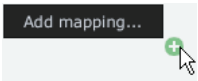
Have a look at the list **Controller**. There are three different keyboard mappings available now: the two embedded mappings and the duplicate you just created. Only one of the mappings can be active at one time.



4 Make sure that the duplicated mapping is selected in the list **Controller**.

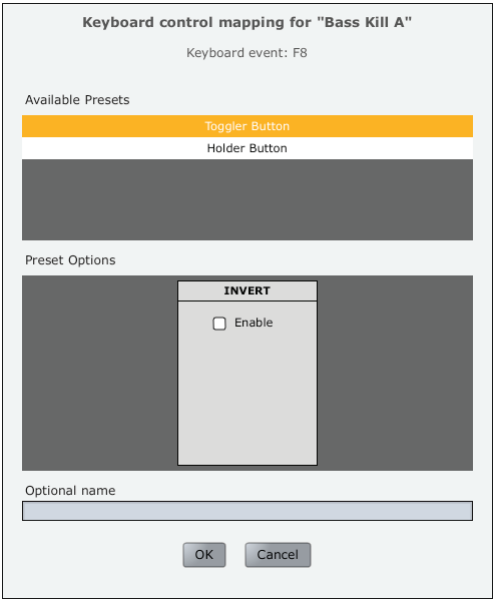
5 Click the **Plus** button before the category **Mixer** to expand this node. You now see all mappable commands and the shortcuts that are already defined for some of the commands.

6 Click the **Add mapping** button next to **Bass Kill A**. The keyboard control mapping windows is opened.



7 Press the F8 key. The pressed key is shown as a keyboard event. You can now choose between two different presets. These presets are identical to those you see when you create a mapping for a MIDI controller.

- **Toggler Button** A toggler button toggles the status of the mapped command between On and Off.
- **Holder Button** A holder button activates the mapped command only for as long as the key is held.
- You can use option **Invert** if you wish to invert the functionality of the control (see page 38).



8 Leave preset **Toggler Button** activated and click **OK** to close the **Keyboard control mapping** window.

9 Repeat steps 6 to 8, but this time add a mapping for the **Bass Kill B** command and assigned it to the F9 key.

10 Close the **Preferences** dialog and check, if the new keys are working.

Importing and Exporting Keyboard Mappings

Keyboard mappings can be imported and exported in the same way as explained for controller mappings (see page 40 and onwards). Make sure, that the **Keyboard** panel of the **Preferences** dialog is open if you wish to import or export a keyboard mapping.

5/ Configuring the CROSS Remote Apps

With the CROSS remote apps you can control CROSS remotely from your iPad, your iPod touch, or from your iPhone. The remote apps simulate an external Wi-Fi external DJ controller. All mixing is done in the CROSS software running on your Mac or on your PC. In this setup your standard audio interface is used so you will achieve the sound quality that you expect from professional DJ software.

Communication between CROSS and the remote apps is bi-directional. This allows sending commands from the remote app to CROSS as you would expect. At the same time the names of the loaded tracks and all playback information (current tempo, current playback position, remaining play time and so on) are visible on the remote app screen, because CROSS can send this information to your remote app.

The CROSS remote apps are available in the Apple App Store. Once you have purchased and installed the remote app you need to configure the wireless adapter of your laptop. The steps you need to follow are slightly different depending on the operating system you are using for CROSS. The following sections contain detailed information for Windows XP, Windows 7, and Mac OS X. Once the Wi-Fi network has been created you can connect your CROSS remote app to CROSS.

5.1 Setting up the Ad Hoc Network on Windows XP

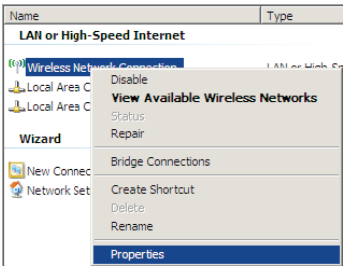
Perform the following steps to configure an Ad Hoc network on Windows XP

1 Open **Control Panel** and open the **Network Connections** applet.

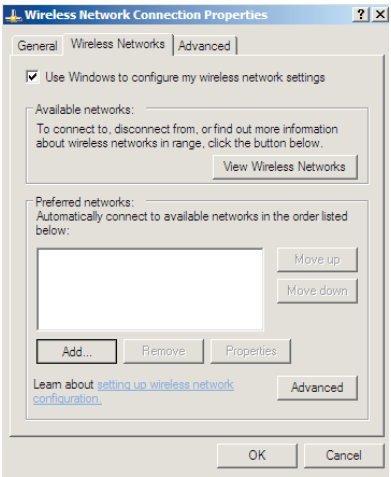
2 Deactivate all internet connections. You can use U-MIX REMOTE while your internet connections are active. However, for performance reasons we recommend deactivating your internet connections.

Also deactivate your antivirus software and your firewall to make sure that U-MIX REMOTE can connect to CROSS via the wireless connection.

3 Right-click on **Wireless Network Connection** and select **Properties**.

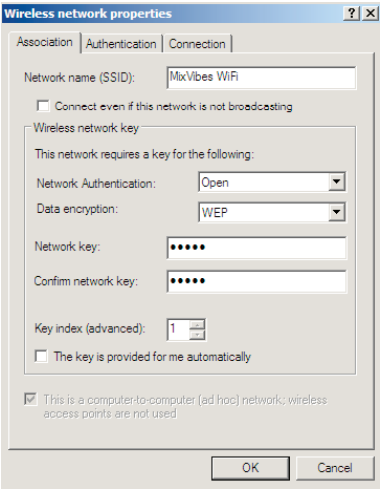


4 Open the **Wireless Networks** tab and click **Add.**

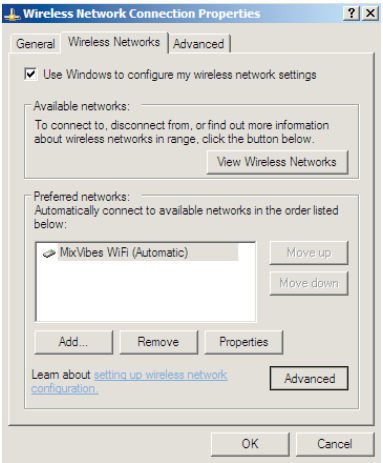


5 Enter a name for the network into the **Network Name (SSID)** field, deactivate the option **The key is provided for me automatically**, select **WEP** as

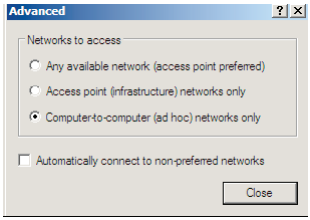
data encryption mode and enter a password of 5 or 13 characters into the **Network Key** field. Finally click **OK.**



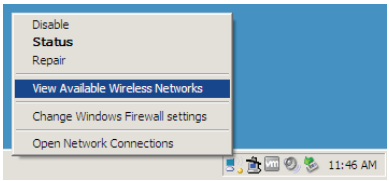
The new network should appear in the networks list, as shown in the following image.



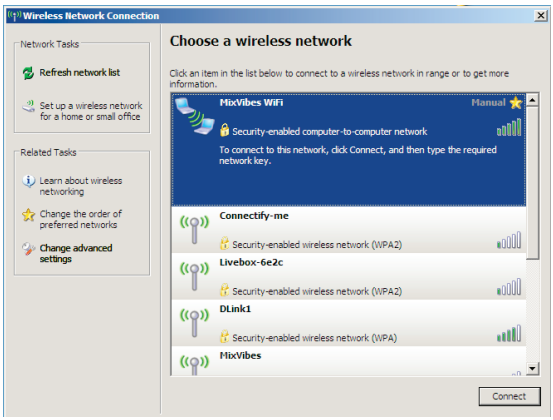
6 Click on **Advanced** to open the **Advanced** dialog box. Make sure that option **Computer-to-computer (ad hoc) networks only** is selected and click **Close**.



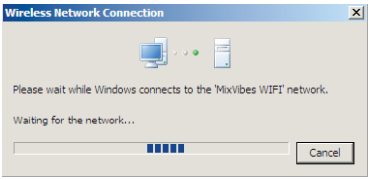
7 Right-click the icon **Wireless Connection** icon in the notification area of the Windows task bar. Select **View Available Wireless Networks** in the context menu.



8 If the network you just created is not connected yet, select it in the networks list and click **Connect**.


Wireless Network Connection
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
MixVibes WiFi
Manual
Security-enabled computer-to-computer network
To connect to this network, click Connect, and then type the required network key.
Connectify-me
Security-enabled wireless network (WPA2)
Livebox-6e2c
Security-enabled wireless network (WPA2)
DLink1
Security-enabled wireless network (WPA)
MixVibes
Connect

Windows will show the following dialog box informing you that the network is activated and that it is waiting for devices to connect.

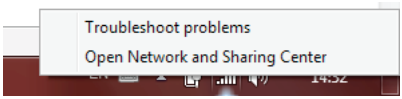

Wireless Network Connection
Please wait while Windows connects to the 'MixVibes WIFI' network.
Waiting for the network...
Cancel

Now continue as explained on page 54 to connect your remote app to CROSS DJ.

5.2 Setting up the Ad Hoc Network on Windows 7

Perform the following steps to configure an ad hoc network on Windows 7:

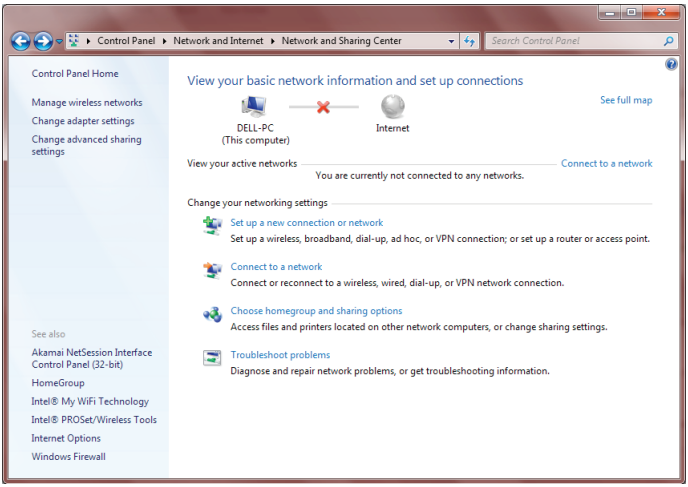
1 Right-click the icon **Wireless Connections** in the notification area of the task bar. Select **Open Network and Sharing Center** in the context menu.



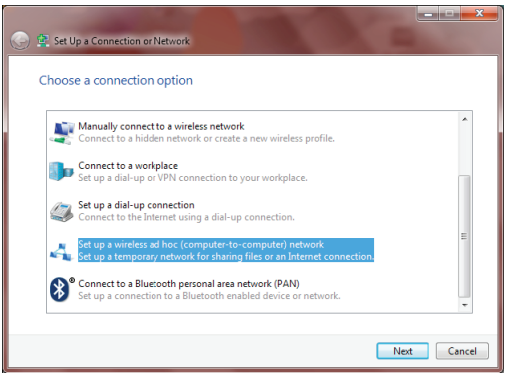
2 Deactivate all internet connections. You can use U-MIX REMOTE while your internet connections are active. However, for performance reasons we recommend deactivating your internet connections.

Also deactivate your antivirus software and your firewall to make sure that U-MIX REMOTE can connect to CROSS via the wireless connection.

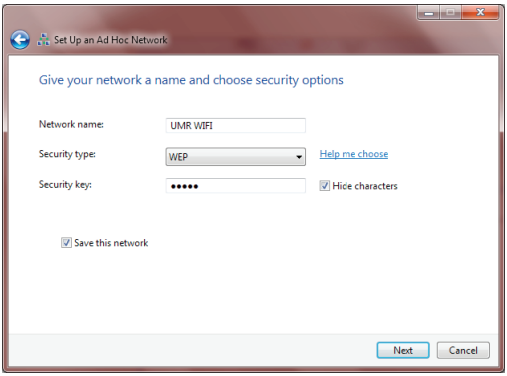
3 In the **Network and Sharing Center** window click on **Setup a new connection or network**.


Control Panel ▸ Network and Internet ▸ Network and Sharing Center
Search Control Panel
Control Panel Home
Manage wireless networks
Change adapter settings
Change advanced sharing settings
View your basic network information and set up connections
See full map
DELL-PC
(This computer)
Internet
View your active networks
Connect to a network
You are currently not connected to any networks.
Change your networking settings
Set up a new connection or network
Set up a wireless, broadband, dial-up, ad hoc, or VPN connection; or set up a router or access point.
Connect to a network
Connect or reconnect to a wireless, wired, dial-up, or VPN network connection.
Choose homegroup and sharing options
Access files and printers located on other network computers, or change sharing settings.
Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.
See also
Akamai NetSession Interface Control Panel (32-bit)
HomeGroup
Intel® My WiFi Technology
Intel® PROSet/Wireless Tools
Internet Options
Windows Firewall

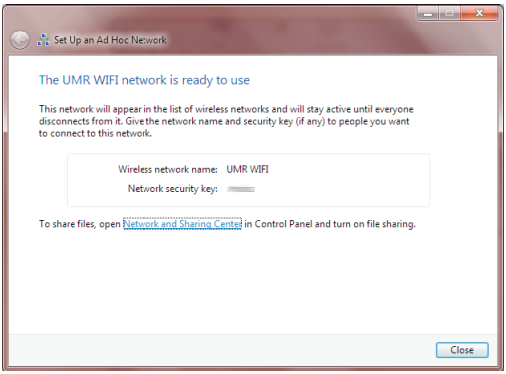
4 In the **Setup a new connection or network** dialog click on **Set up a wireless ad hoc (computer-to-computer) network**.


Set Up a Connection or Network
Choose a connection option
Manually connect to a wireless network
Connect to a hidden network or create a new wireless profile.
Connect to a workplace
Set up a dial-up or VPN connection to your workplace.
Set up a dial-up connection
Connect to the Internet using a dial-up connection.
Set up a wireless ad hoc (computer-to-computer) network
Set up a temporary network for sharing files or an Internet connection.
Connect to a Bluetooth personal area network (PAN)
Set up a connection to a Bluetooth enabled device or network.
Next
Cancel

5 Enter a network name, select **WEP** in list **Security type** and enter a password of either 5 or 13 characters into the **Security key** field. Click **Next**.



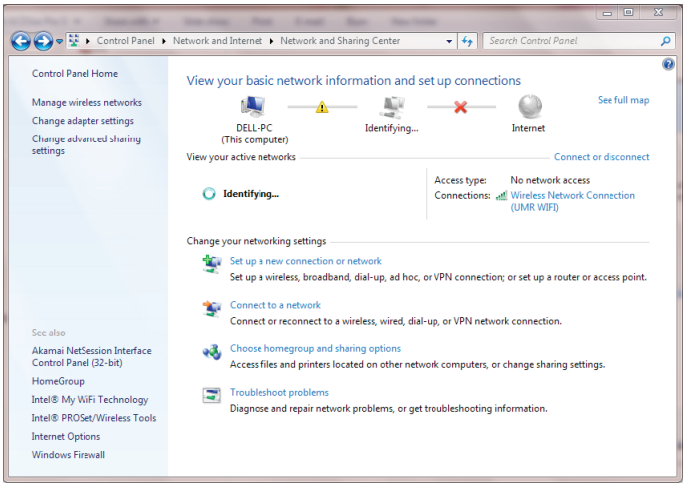
6 Windows will show the dialog you see in the following image. Click on **Close** to return to the **Network and Sharing Center**.


Set Up an Ad Hoc Network
The UMR WIFI network is ready to use
This network will appear in the list of wireless networks and will stay active until everyone disconnects from it. Give the network name and security key (if any) to people you want to connect to this network.
Wireless network name: UMR WIFI
Network security key:
To share files, open Network and Sharing Center in Control Panel and turn on file sharing.
Close

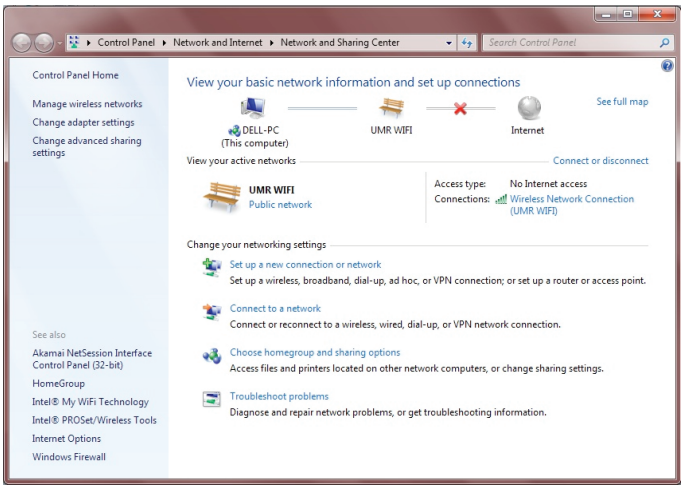
The **Network and Sharing Center** will look like shown in the following figure. The new network is created and is waiting for devices to connect:

7 Open the **Settings** app on your iPad, go to **Wi-Fi**, turn Wi-Fi on if it is currently off. Then select the network you just created from the list of networks. Enter the password you selected while creating the Ad Hoc network in Windows and tap **Join**.

The **Network and Sharing Center** should now look as shown in the following figure:


Control Panel ▸ Network and Internet ▸ Network and Sharing Center
Search Control Panel
Control Panel Home
Manage wireless networks
Change adapter settings
Change advanced sharing settings
View your basic network information and set up connections
See full map
DELL-PC
(This computer)
Identifying...
Internet
View your active networks
Connect or disconnect
Identifying...
Access type: No network access
Connections: Wireless Network Connection (UMR WIFI)
Change your networking settings
Set up a new connection or network
Set up a wireless, broadband, dial-up, ad hoc, or VPN connection; or set up a router or access point.
Connect to a network
Connect or reconnect to a wireless, wired, dial-up, or VPN network connection.
Choose homegroup and sharing options
Access files and printers located on other network computers, or change sharing settings.
Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.
See also
Akamai NetSession Interface Control Panel (32-bit)
HomeGroup
Intel® My WiFi Technology
Intel® PROSet/Wireless Tools
Internet Options
Windows Firewall

It takes a while (most often between 2 and 5 minutes) until the Network and Sharing Center is updated and will show the connected status:


Control Panel ▸ Network and Internet ▸ Network and Sharing Center
Search Control Panel
Control Panel Home
Manage wireless networks
Change adapter settings
Change advanced sharing settings
View your basic network information and set up connections
See full map
DELL-PC
(This computer)
UMR WIFI
Internet
View your active networks
Connect or disconnect
UMR WIFI
Public network
Access type: No Internet access
Connections: Wireless Network Connection (UMR WIFI)
Change your networking settings
Set up a new connection or network
Set up a wireless, broadband, dial-up, ad hoc, or VPN connection; or set up a router or access point.
Connect to a network
Connect or reconnect to a wireless, wired, dial-up, or VPN network connection.
Choose homegroup and sharing options
Access files and printers located on other network computers, or change sharing settings.
Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.
See also
Akamai NetSession Interface Control Panel (32-bit)
HomeGroup
Intel® My WiFi Technology
Intel® PROSet/Wireless Tools
Internet Options
Windows Firewall

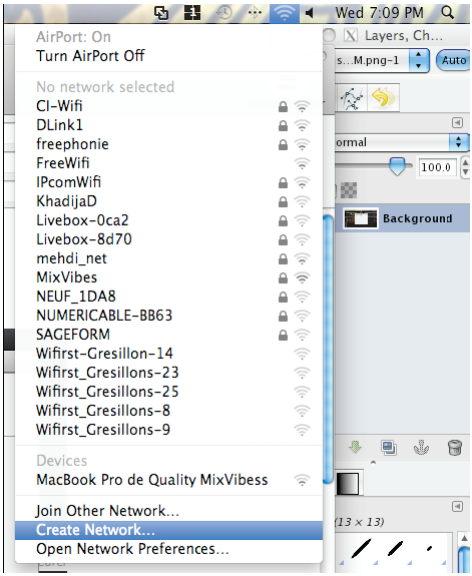
8 Close the Network and Sharing Center.

Now continue as explained on page 54 to connect your remote app to CROSS DJ.

5.3 Setting up the Ad Hoc Network on Mac OS X

Perform the following steps to configure an ad hoc network on Mac OS X.

1 Click the **AirPort** icon in the menu bar and then click on **Create Network**.



2 Enter a name for the new network. Select **40-bit WEP** in list **Security**, enter a password into the **Password** and **Verify** fields and click **OK.**

Create a Computer-to-Computer network.
Enter the name of the Computer-to-Computer network you want to create.
Name: MixVibes WiFi
Channel: 1
Require Password
The password must be entered as exactly 5 ASCII characters or 10 hex digits.
Password:
Verify:
Security: 40-bit WEP (more compatible)
Cancel
OK

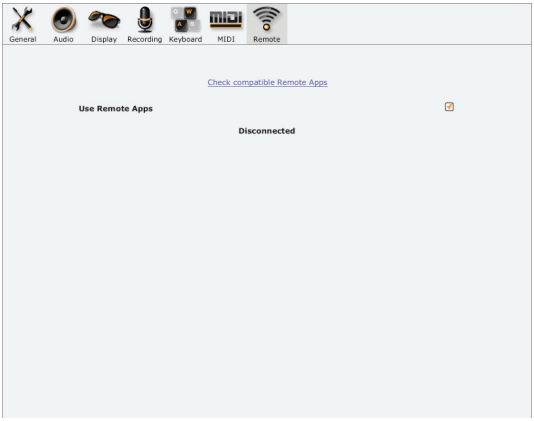
Now continue as explained in the next section to connect your remote app to CROSS DJ.

5.4 Connecting the Remote App to CROSS DJ

Once you have created the Ad Hoc network and made the connection between your computer and your iPad, iPod touch, or iPhone you need to connect youre remote app and CROSS DJ by performing the following steps:

1 Open the **Settings** app on your iPad/iPod touch. or iPhone, go to **Wi-Fi**, and turn Wi-Fi on if it is currently off. Select the network you have just created from the list of networks. Enter the password you selected while creating the Ad Hoc network and tap **Join**.

2 Go to CROSS DJ. Open the **File** menu and click **Preferences**. Click **Remote** to open the **Remote** tab.



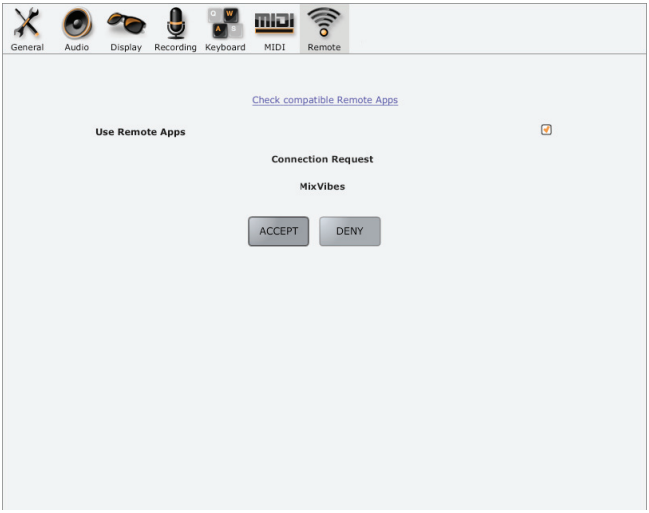
3 Make sure that the check box **Use Remote Apps** is activated.

4 Launch the remote app on on your iPad/iPhone/iPod touch.

5 The start screen of your remote app shows the names of all computers (not the network names) that are connected to the Ad Hoc network and that are running CROSS DJ with **Use Remote Apps** activated on the **Preferences/ Remote** tab.

6 Select the computer you wish to connect to.

7 Return to CROSS DJ. On the **Remote** tab you see that a connection request from the remote app has arrived. Click **Accept** to accept the connection.



Your remote app will connect to CROSS DJ and the app should be ready to go.

TIP If the connection lags for more than 30 seconds, uncheck the **Use Remote Apps** checkbox in Cross and re-check it to reinitialize the connection. If this does not help, restart Cross.

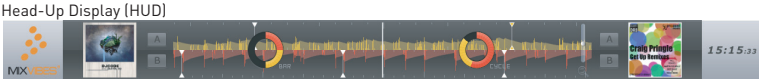
6/ The CROSS DJ User Interface

The user interface of CROSS DJ is composed of several panels, where each panel has its own functionality. The feature set of some panels, like the mixer, is based on the functionality known from classic analogue DJing. Other features, like the Beat Matcher in the Head-Up Display or the Match and Sync functionality, are tools unique to digital DJing.

6.1 The Panels at a Glance

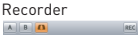
The following graphics shows the different panels of CROSS DJ user interface.

Head-Up Display (HUD)



Player A

Recorder



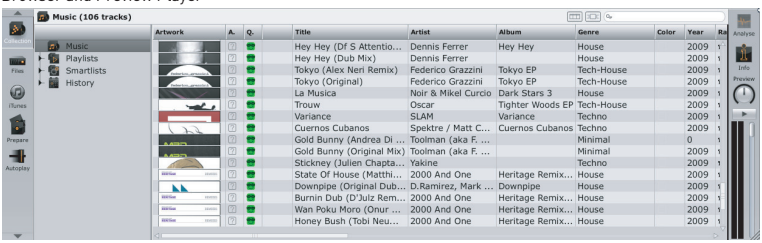
Mixer

Player B

Advanced Controls Player A

Advanced Controls Player B

Browser and Preview Player



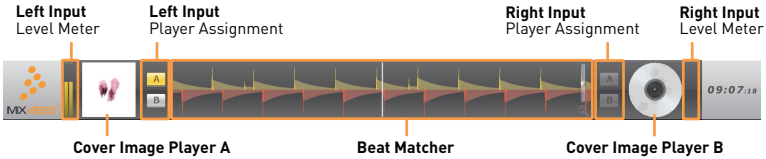
Artwork	A.	Q.	Title	Artist	Album	Genre	Color	Year	Ra
			Hey Hey (Df S Attentio...	Dennis Ferrer	Hey Hey	House		2009	1
			Hey Hey (Dub Mix)	Dennis Ferrer		House		2009	1
			Tokyo (Alex Neri Remix)	Federico Grazzini	Tokyo EP	Tech-House		2009	1
			Tokyo (Original)	Federico Grazzini	Tokyo EP	Tech-House		2009	1
			La Musica	Noir & Mikel Curcio	Dark Stars 3	House		2009	1
			Trouw	Oscar	Tighter Woods EP	Tech-House		2009	1
			Variance	SLAM	Variance	Techno		2009	1
			Cuernos Cubanos	Spektre / Matt C...	Cuernos Cubanos	Techno		2009	1
			Gold Bunny (Andrea Di ...	Toolman (aka F. ...		Minimal		0	1
			Gold Bunny (Original Mix)	Toolman (aka F. ...		Minimal		2009	1
			Stickney (Julien Chapta...	Yakine		Techno		2009	1
			State Of House (Matthi...	2000 And One	Heritage Remix...	House		2009	1
			Downpipe (Original Dub...	D.Ramirez, Mark ...	Downpipe	House		2009	1
			Burnin Dub (D'Julz Rem...	2000 And One	Heritage Remix...	House		2009	1
			Wan Poku Moro (Onur ...	2000 And One	Heritage Remix...	House		2009	1
			Honey Bush (Tobi Neu...	2000 And One	Heritage Remix...	House		2009	1

Selecting the User Interface Language

If the user interface is not in your language or the language you wish to use you can change it. Open the File menu and click on Preferences. Make sure that the Display tab is open. Open the list Language and select your preferred language.

Head-Up Display

The Head-Up Display in the upper part of the CROSS DJ windows is the control centre for the external inputs and it contains the Beat Matcher, which serves as a visual guide for getting your tracks beat synchronised. When the media loaded into one of the players contains artwork, like a cover image, it is shown in the Head-Up Display.



The buttons A/B at the left and the right side of the Head-Up Display allow to connect external inputs to player A or player B. The buttons on the left control the source configured as Left Input and the buttons on the right control the source configured as Right Input (**Preferences** dialog, **Audio** tab).

When there is no external source configured to an input then the corresponding buttons are disabled, as you can see for the Right Input in the image above. Otherwise the buttons are enabled and you can click them to select, via which player the external source shall be audible. An external input can only be assigned to one of the players.

Let's assume that your MP 3 player like the iPod™ is connected to the Left Input, you have an audio file playing in player A and that you wish to play some music from the MP3 player next. To achieve this you should click button B on the left side of the Head-Up Display to be able to get the music from your MP3 player into the CROSS DJ mixer.

The largest part of the Head-Up Display is occupied by the Beat Matcher. The Beat Matcher displays the peak/transient information of the tracks currently playing in the two players. For tracks that have a beatgrid, CROSS can also show the grid on the Beat Matcher. Additionally, you can enable the Bar Sync Meter and the Cycle Sync Meter, which serve as a visual guide when beat mixing your tracks. The beatgrid and the sync meters can be activated on the **Display** tab of the **Preferences** dialog.

Player A and B

The largest area of the CROSS DJ user interface is occupied by the two players.

The player on the left is called player A (yellow); the player on the right is player B (red). The waveform area shows a section from the track currently playing. You can use the outer buttons to zoom in, zoom out and to reset the waveform to the default zoom factor. The white vertical line is the play marker and marks the part of the track that is currently audible.

The inner panel of the players contain the pitch faders that work similarly to the pitch faders that can be found on turntables and CDJ players.

The section with the black background shows some vital playback information: the current time, the remaining time, the current BPM and the current tempo change as a percentage value.

The Transport section contains the Play/Pause and the Cue buttons; they work in a similar way to the corresponding buttons on a CDJ player. You can use the Smart Seek buttons in the Transport section to jump forward/backward in a track and define the jump length in beats or fractions of a beat. Click the Reverse button at the right side of the Transport section if you wish to play the track backwards.

Advanced Controls for Player A/B

Below the player you see a panel with the advanced controls. They allow you to set locators/hot cues in your tracks, to create automatic and manual loops and to modulate the player audio with the effects. Chapter 9 starting on page 88 takes a closer look at the features of the advanced controls panel

Mixer

There are two different views for the Mixer panel: one for internal mixer mode and another one for external mixer mode.

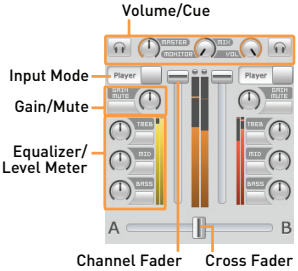
The Mixer panel in internal mixer mode has all the controls that you would find on a classic DJ mixer:

- The Volume section with three knobs where you can control the Master out volume, the Headphone volume and the ratio between the Monitor and the Mix signal that is sent to the Headphones.
  The Master Volume can be set on U-MIX CONTROL PRO with the Master knob on the top panel of the controller. The right side of the front panel contains two knobs to set the ratio between the Monitor and the Mix signal and the volume of the headphones.

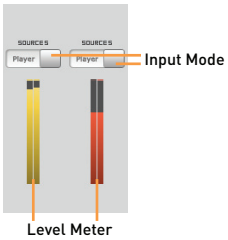
- The Cue/Monitor buttons for each player. Activating the Cue button of a player sends the audio to the Headphones; the channel fader of the corresponding player does not need to be up for the audio to be heard.
- The two channel faders that control the volume of the two players.
- The cross fader that controls the ratio between the left player and the right player. If you use U-MIX CONTROL PRO you can configure the shape of the cross fader curve with the knob on the rear panel of the controller from a quick cut for scratching or to a longer fade for mixing.

- A 3 band equalizer for each player to control the cut/boost of the three frequency ranges and a Kill button for each range to complete cut it. The mixer sections of the U-MIX CONTROL PRO and U-MIX CONTROL 2 controllers contain dedicated encoders for the three frequency ranges of the equalizer. Turn the encoders to modify the equalization of your media file. Treble, medium and bass can be adjusted with these knobs. Press the encoder to completely cut the low, mid or high frequencies of your media file.
- A Gain knob to set the Gain level and a Mute button to mute the audio of the corresponding player.

Internal Mixer Mode



External Mixer Mode



In both mixer modes the Mixer panels show the pre-fader level of the player. Pre-fader means that the position of the channel fader and the cross fader does not affect the level meter.

Again, in both mixer modes you can use the **Sources** button to select the Input Mode.

Recorder

The buttons in the Recorder panel can be used to record your mix, to record the audio of the players, or to record both at the same time. More information about the Recorder panel can be found in section "Recording" on page 99

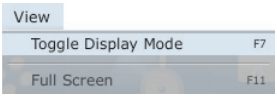
Browser and Preview Player

The Browser panel allows you to access the tracks in your collection and your iTunes library. This panel offers some sophisticated search features so you can quickly find the track you wish to play next. The browser is explained in more detail in chapter 7 on page 73 and onwards.

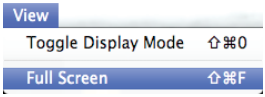
The preview player can be used to preview the track that is currently selected in the browser. You do not need to load a track into the preview player, simply press its Play button. The audio from the preview player can be heard in your headphones if you use internal mixer mode. In external mixer mode the audio of the preview player is routed to the audio interface port configured as Output 3.

6.2 Changing the Screen Layout

You can use the commands in the **View** menu or the corresponding keyboard shortcuts to change the layout of CROSS DJ.



(Windows)



(Mac)

Use the command **Toggle Display Mode** to toggle between Browser View and Mix View. In Browser View the players and the mixer are hidden to allow easier and faster browsing in your collection and playlist. In Mix View the players and the mixer are visible and the browser occupies the remaining space.

The **Full Screen** command does exactly what is says: it maximises the CROSS DJ window so that it occupies the complete screen.

7/ Importing and Mixing your Music

Before you can play and mix your audio files with CROSS DJ, the files should be imported into the track collection. This chapter explains the basic steps that need to be done and will then show you how to mix two tracks with CROSS DJ.

7.1 Importing Folders

Perform the following steps to import an entire music folder or disc:

1. Open the **File** menu and click **Import Directory.**
2. Select a folder or a drive with the audio files you wish to import. Click **OK.**
3. CROSS DJ will import all audio files from the selected drive or folder and its subfolders into the collection. Once the import has been done, the files are shown in the **Collection** view of the CROSS DJ browser.

> **TIP** If you wish to import a single file only or a group of files from within one folder open the **File** menu, click **Import File**, select the file/s you wish to import and click **Open**.
>
> To import a playlist in .m3u or .pls format open the **File** menu, click **Import Playlist**, select the playlist file and click **Open**.

7.2 Importing Tracks from iTunes

If you use Apple's iTunes® software to manage your track collection, you can access your iTunes® Library and playlists by clicking on the iTunes® tab in the Dock. Perform the following steps to import tracks from iTunes®:

1. Click the iTunes® icon in the browser dock to open your iTunes library. (If the iTunes® icon is not visible, right-click the dock and select iTunes.)

2. Select the tracks you wish to import.
3. Perform one of the following actions:
   - Drag and drop your selection onto the Collection icon in the dock.

- Right-click (CTRL-click on Mac) the selection and choose **Add to Collection** from the context/action menu.

7.3 Importing Collections from other DJ Software

CROSS DJ makes it easy to import collections and tracks from Traktor, Rekordbox, and from Virtual DJ. During the import not only the audio files are imported, but also any playlists that you have created in the supported third party applications. Also imported is certain track information, like beatgrids, cue points and – if applicable – the first loop you set in the third party tool.

Perform the following steps to import the collection from another DJ software:

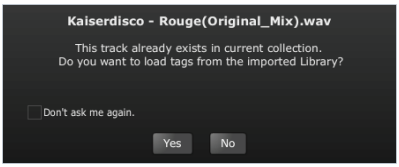
1. Open the **File** menu and select **Import Third Party Database**. CROSS DJ opens a dialog box where you can select the database file of the third party application.
2. Browse to the folder with the third party collection file:
   - To import a Traktor collection, open the folder **Native Instruments/Traktor x.x.x** below your documents folder. **x.x.x** represents the Traktor version you are using. If you changed the default location of the collection file (one the **Preferences/File Management** tab), open this folder instead. Then select the file **collection.nml**.
   - To import a Rekordbox playlist, open the folder where you exported the Rekordbox playlist information to, and the select the file created by Rekordbox.
   - To import a Virtual DJ database, open the folder **VirtualDJ** below your documents folder and select the file **VirtualDJ Database vX.xml** (**X** represents the version of the database format; the current version is 6).
3. Click **Open** to start the import process.

CROSS DJ will import all audio files from the third party library into the CROSS DJ collection. When the import is done, you will find all audio tracks inside the **Music** node of the collection.

If the imported collection contains playlists, CROSS DJ will import them and create new entries directly below the Playlists node. The Traktor playlists can be found in the node **Playlists/import-Traktor**, the Rekordbox playlists in the node **Playlists/import-Rekordbox**, and the VirtualDJ playlists in the node **Playlists/import-VirtualDJ**. You can drag and drop the imported playlists to a new position in the tree or rename them, if you wish to.

Import of tracks that are already in the CROSS DJ Collection

If the imported collection contains a track that is already in your collection, CROSS DJ will open a message box as shown in the following figure:


Kaiserdisco - Rouge(Original_Mix).wav
This track already exists in current collection.
Do you want to load tags from the imported Library?
Don't ask me again.
Yes
No

- Click **Yes** if you wish CROSS DJ to read the tags from the file; these tags will replace the tags already in the CROSS DJ collection.
- Click **No**, if you do not wish CROSS DJ to keep the tags that are already in the CROSS collection.
- Activate the check box **Do not ask me again** if you wish that all imported tracks shall be handled in the same way as your current selection (Yes/No).

7.4 Analysing imported Files

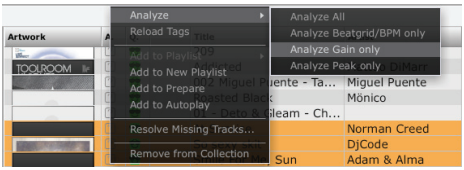
The tracks in your collection need to be analyzed before CROSS DJ can show the full track display and the transient view of the track in the Beat Matcher. In order to use the automatic beat and cycle synchronisation CROSS DJ provides, the BPM and the beatgrid of the track also need to be analyzed. Tracks that are not analyzed when you load them into the players are automatically analyzed.

While the track is being analyzed, the text "Analyzing" is shown in the full track display.

However, it is a good practise to trigger the analysis of newly imported tracks before you load them. The advantage of analysis before use is that the transient view and the full track display are available immediately after loading. If you load a track that has not yet been analyzed it can take a while until the full track display and the waveform in the Head-Up Display are visible. Also, as track analysis consumes CPU time it could lead to crackling sounds and this is something you do not want to hear during your set.

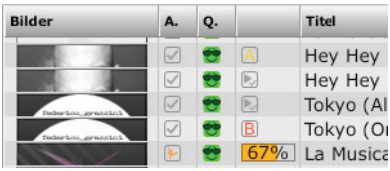
Perform the following steps to analyze tracks:

1. Make sure that the **Collection** tab is opened in the Browser.
2. Select the track/s you wish to analyze.
3. Right-click the selection and open the **Analyze** menu.



4 Select one of the following options depending on what CROSS is to analyze:

- **Analyze all** Use this option to analyze tracks that are added newly to the collection. During the analysis CROSS will do a gain analysis to check, whether the signal strength needs to be raised or lowered when the track is played. Furthermore, a peak analysis is done and the information collected is used to display the waveform of the audio in the HUD and in the full track display on the player. Then, the BPM of the track is detected and CROSS sets the beatgrid for the track. The beatgrid will help you to perform different kinds of beat sync operations (more to be found below).
- **Analyze Beatgrid/BPM only** Use this option to make CROSS analyze the beatgrid and the BPM of the track only. This option is very useful if you updated from CROSS version 1.6 or lower to version 1.7 and higher. In general the gain and peaks of the tracks in your collection are already analyzed. To make use of the new sync features in version 1.7 you only need to perform a beatgrid/BPM analysis.
- **Analyze Gain only** Use this option to analyze the gain of the track only, in case you have changed the gain value of a track and want to restore it to the default, automatically analyzed value.
- **Analyze Peak only** Use this option to only analyze the peaks of the track. This is useful when you do not need the beatgrid or gain information, maybe because you use timecode.



Have a look at column **A.** (short for Analysis Status) and the column with the icons, the **Status** column to see which tracks have been analysed (a check mark in column A.) or not. In the image above the fifth track is currently being analysed and 67% of the analysis is done.

BPM Detection Range

Detecting the tempo of a track can sometimes be a bit tricky. CROSS DJ performs a peak analysis to detect the beats, and then uses the data about the peaks to calculate the BPM. As not all transients/peaks in a track need to be beats, you can "help" CROSS DJ by setting the BPM Detection Range on the **Preferences/ General** dialog.

Use the range that best fits to your music genre: **Slow** is the best setting for Hip Hop, **Standard** is the best choice for House/Techno, and you wish to set the range to **Fast** if you mainly spin Drum 'n' Bass.

7.5 Using the Beatgrid Tools

As you could see in the previous section, CROSS DJ performs a BPM and beat analysis: both values are used to define the initial beatgrid of a track. The beatgrid is initial, because CROSS offers several tools that you can use, to change the beatgrid if necessary.

Before we take a close look at the beatgrid tools of CROSS DJ, we should start by defining some important terms and have a look at the visual representation of the beatgrid as it is shown on the HUD and on the waveform of the players.

> **NOTE** In order to see the beatgrid, you need to activate the checkbox **Show Beat Grids** on the **Display** tab of the **Preferences** dialog. Activating this option makes the grid visible on the HUD and on the waveform. Of course, if no beatgrid has been analyzed, CROSS DJ cannot show it. In this case use the command **Analyze Beatgrid/BPM** only as explained in the previous section.

The beatgrid information on the player is shown as vertical lines. A vertical line with the height of the complete waveform represents a downbeat (i.e. the first beat of a 4 beat bar). The first downbeat gridline that you see on the waveform serves as the reference point of the grid and is marked with yellow triangles at both endpoints. All vertical gridlines that are marked with white triangles at the endpoints represent another downbeat. The gridlines of the beatgrid have the same spacing as CROSS DJ assumes that the tempo of the track is fixed and that it does not change over the duration of the track. The following rules apply to the beatgrid: The greater the spacing of the individual gridlines, the lower the track tempo. The smaller the spacing, the higher the track tempo is.

The individual beats, half beats and quarter beats of one bar are symbolized by shorter vertical lines. The number of shorter vertical lines that are visible depends on the current zoom factor of the waveform display on the player and the HUD. The more zoomed in you are, the more shorter lines are visible. The grid that was analyzed by CROSS DJ is called the base grid.

The Beatgrid Toolbar on the Player

The lower right corner of the player A and the lower left corner of player B contains the button Show/Hide Beatgrid editor. If you click the button to make the beatgrid editor visible, a toolbar is displayed in the lower area of the waveform. This toolbar contains all the buttons that you need, to make changes to the beatgrid.

When the Beatgrid toolbar is visible, CROSS DJ changes the display of the grid-lines on the player as well. As you can see in the following image, each beat is now represented by a vertical gridline with the same height of the waveform. These longer grid lines make it easier to see, whether the grid fits perfectly to the track or not.

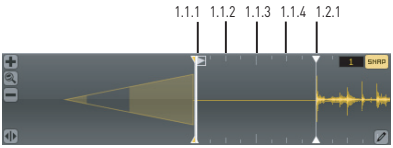
You can use the following buttons of the toolbar to change the active grid:

The first two buttons of the toolbar can be used to expand or to shrink the distance between the gridlines. Shrinking the beat intervals increases the BPM of the track: the gridlines are now closer to each other and this will lead to an increase in the tempo. Expanding the beat intervals decreases the BPM of the track: the gridlines are now further apart from each other and this will lead to a decrease in the tempo.

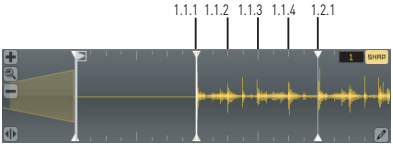
With these two buttons you can move the first downbeat (the line that is used as the reference point of the grid) to the left or to the right. When this downbeat is sitting at the right position (exactly on the transient) it makes it easier to use the automatic sync features of CROSS DJ. It is a good practice to zoom into the waveform before you move the first downbeat/the grid.

Use this button to convert the beat closest to the current playback position into a new downbeat. The button **Define Downbeat** is only active if the track has a beatgrid; otherwise it is disabled. The new downbeat resets the cycle/bar/beat-counter of the track. This is useful if you use the "sync to cycle" feature of CROSS DJ. Let's have a look at an example track that shows how this works.

On the track in the following image a beatgrid analysis was performed. CROSS DJ has set the downbeat at the very beginning of the track, even though the track starts with 4 beats = 1 bar of silence. If we number the first beats of this track with a Cycle.Bar.Beat schema, the counter for the beats is 1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.2.1.



Because the track starts with 4 beats of silence, this numbering is wrong and does not reflect the real musical structure of that track. The fifth beat, which is the first audible beat, should be 1.1.1. If you drag the waveform to this beat and click on **Define Downbeat**, CROSS DJ adds a new downbeat marker to the grid (marked with the yellow triangles), and resets the internal beatcounter.



The internal beatcounter that CROSS DJ uses to automatically sync to the cycle/bar/beat of the track in the other player, now has a correct value to do this synchronisation.

If the configured BPM detection range does not fit to the tempo of the genre, you often get BPM values which are twice as large or half as small as the real tempo. To correct this kind of BPM error, you can use these two buttons to halve or double the BPM value of the currently loaded track.

To delete all beatgrid information, click the **Clear Beatgrid** button. When the track has no beatgrid, the button **Analyze Beatgrid** is shown. Click this button to perform a BPM and a beatgrid analysis.

Using User Beatgrids

Sometimes tracks do not use a strict 4/4 signature throughout the whole track. Let's assume you have a track with a beat length that cannot divided by 4 without a remainder, or another track with a tempo change where one part of the track has a different BPM than the other. For those tracks you can add a user beatgrid. The number of additional user beatgrids that you can add is unlimited.

When you add a user grid you actually set the position of a new downbeat (the first beat of a bar) and this downbeat can be set to any position of the track.

To set a user beatgrid, drag the waveform to the desired position and click the **Add Beatgrid** button on the Beatgrid Editor toolbar. The new user beatgrid serves as the reference point of the grid from the position of the marker towards the end of the track. The waveform before the user beatgrid marker is shown in grey indicating that this segment is not affected by the current downbeat marker. The waveform behind the user beatgrid marker is shown in yellow/red (depending on the player), indicating that this segment of the track is affected by the current downbeat marker.

Setting a new user beatgrid also resets the bar and beat counter value to 1. You can change the tempo of a new segment with the shrink/expand buttons only. Each user beatgrid can have a different tempo.

If you wish to delete a user beatgrid, drag the waveform and make sure, that the current playback position is behind the user beatgrid downbeat you wish to delete. Then click the **Delete Beatgrid** button on the Beatgrid Editor toolbar.

Section „A closer Look at the Beat Matcher" auf Seite 82 in this manual will show you, how the beatgrid of the track will help you, to either manually or automatically synchronize the tracks in the two players.

7.6 Loading Tracks into the Players

Once your audio tracks are imported into the collection you can load them into the players. Depending on your setup you can use the controller, the mouse or the keyboard to load tracks.

Loading Tracks with U-MIX CONTROL PRO/U-MIX CONTROL 2

Perform the following steps to select and load a track with the controller:

1. Use the **Browse** encoder to scroll through your collection. Or hold the **Shift** button and turn the **Browse** encoder to scroll by 10 tracks through your collection.
2. Press **Load A** to load the selected track into player A, or press **Load B** to load it into player B.

If you use a different controller than U-MIX CONTROL PRO/2, it will most likely have Browse and Load controls as standard. Please have a look at the manual of your controller or at the PDF file documenting the MIDI preset of your controller (see page 30 for more information)

Loading Tracks with the Mouse

Perform one of the following actions to select and load a track:

- Drag and drop a track from any of the tracklist types onto one of the players.
- Drag and drop a track from any of the tracklist types onto one of the waveforms in the beat matcher to load the track into the corresponding player.
- Right-click (CTRL-Click on Mac) the track and select **Load in Player/A**, or **Load in Player/B** or **Load in Player/Active**.

> **NOTE** The active Player is the player where you can see the yellow (player A) or red (player B) bar at the very top of the player above the track title in the user interface. You can select which player is currently active by clicking an empty space on the player or by pressing the [⇆] key.

Loading Tracks with the Keyboard

Perform the following steps to select and load a track:

1. Hold [Ctrl] (Windows) or [cmd] (Mac) and press [↓] and [↑] to scroll through your collection and to select the track you wish to load.
2. Hold [Ctrl]+[⇧] (Windows) or [ald]+[cmd] (Mac). Then press [←] to load the track into player A or press [→] to load the track into player B.

> **NOTE** By default CROSS DJ/CROSS DJ LE loads the track completely into the memory of your computer for quick access, which puts some load on the CPU. The amount of memory that may be used by CROSS DJ can be configured with the **Audio Cache** slider in **Preferences/General**. In most cases you will not need to change the default setting. If you prefer your tracks to be streamed directly from the audio files, set the **Audio Cache** slider to 0%.

Loading into playing Decks

Please note that the default security setting does not allow you to load a new track if a player is currently playing. This setting can be changed on the **General** tab of the **Preferences** dialog by deactivating the **Security Mode** checkbox. However, this setting can protect you from accidentally loading a track into the wrong player and it is best left activated.

7.7 Your First Mix

Once you have some tracks imported into the collection you are ready for your first mix.

1. Load a track into player A.
2. Press the **Play** button on the controller or click the **Play** button on the player to start playback of the track in player A.
3. Open the channel fader for player A.
   - If you are using one of the U-MIX CONTROL controllers, move the volume fader for player A upwards. Also make sure that the cross fader is in the middle position or at the outer left position.
   - If you are using an external mixer, open the volume fader for the channel where you routed Output 1 to.
   - If you do not use a controller, use the mouse and move the volume fader in the mixer for player A upwards.

   You should now hear the music in your speakers.
4. Load your second track into player B and start playback of player B.
5. While the track on player A is playing to the public, press the Cue/Monitor button for player B. You now can pre-listen to the next track on player B in your headphones while the audience listens to the track being played on player A over the speakers.
6. The tempo of the two tracks is most likely not the same. You need to match the tempo of both tracks, and synchronize the beats of player B to player A to get a smooth transition. Use one or several of the following techniques and tools:
   - Adjust the tempo/BPM of the new track to match the one that is currently playing by using the pitch fader.
     If you want CROSS DJ to take care of the tempo adjustment click the Match button on player B.
     If you use U-MIX CONTROL PRO/ U-MIX CONTROL 2, hold the SHIFT button on the controller and press the SYNC button for player B.

- Once the two tracks are being played with the same BPM, you need to make sure, that their beats match.

  You can achieve this by using pitch bend buttons on the user interface or the controller (see section "Using the Pitch Controls" on page 88 for more information). The pitch bend buttons are also used for slowing down/speeding up the playback of a player temporarily. This shifts the playback position of the beats.

  If you use U-MIX CONTROL PRO/ U-MIX CONTROL 2 or another controller with a jogwheel, use the jogwheel to perform the same action.

  If you wish CROSS to take care of the tempo and beat adjustment, click the **Sync** button on the player with the new track. On the U-MIX CONTROL PRO/ U-MIX CONTROL 2, press the **SYNC** button for the player with the new track.

  Which action that is triggered by the **Sync** button depends on the **Sync Mode** setting that you can select in the **General** tab of the **Preferences** dialog. Clicking sync always matches the tempo of the track to one or the other player, and either, syncs to the beat, the bar or the cycle of the other track. (See section „Sync-Meters" on page 84 for more information about the sync modes.)

- Use the Beat Matcher in combination with the Sync Meters in the Head-Up Display as a visual indicator. The next section shows some examples of what you can read in the Beat Matcher and how the Sync Meters can help you to synchronize your tracks.

7 Adjust the volume level by using the Gain knob. The Gain knob allows you to set the overall level to match that of the track playing on the other deck.

> **NOTE** If you change the Gain level of a track, CROSS DJ stores the new value in the collection file. If you load the track again, the changed gain setting is automatically applied.

8 To make the blend from one track to another, move the crossfader from left to right, or use the channels faders on your controller or external mixer.

9 You can also change the channel equalization of the mixer to make the transition between the two tracks more smoothly.

10 Additionally you can use the effects and loops to highlight different parts of an audio track.

> **TIP** If you are using the U-MIX CONTROL PRO you can change the cross fader curve on the rear panel on the controller. You can set the curve to a quick cut that is best for scratching to a longer fade, which is best for beat mixing.

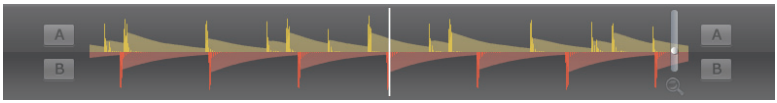
7.8 A closer Look at the Beat Matcher

Let's have a closer look at the Beat Matcher so we can understand what information it provides and how it can assist you in achieving the synchronisation of two tracks.

The Beat Matcher can display three different kinds of information: the peaks, the beatgrid and the sync meters.

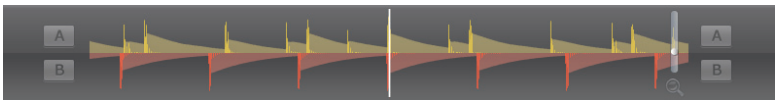
Peaks of the Track

The peaks display in the Beat Matcher shows a kind of level information of the tracks currently loaded in the players. The peaks view is always on and cannot be disabled. The peaks data is analyzed when you drag a new track onto one of the players, or when you select **Analyze all** or **Analyze Peak only** in the context menu for the tracks in the track browser.



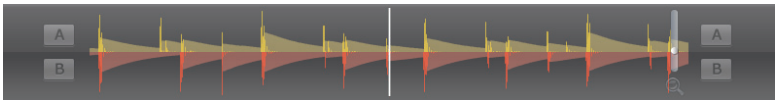
In both waveforms you can see several vertical lines. These lines represent the peaks, or transients, in the track. Depending on the rhythm of the track, these peaks may be the beats of the track, but they may not always be where the beats are. The track in player A (upper waveform) shows some longer and some shorter peak lines. In most cases the longer lines are there where the beats are. The beats in player B are much more obvious; the part you see in the image is from the track intro which has a clear beat.

If you move the waveform of player B by pitch bending to get two peak lines aligned it becomes very clear, as you can see in the following image.



The larger distance between beats in player B implies that the tempo of that track is too slow compared with the track in player A. If you were to start playback of both tracks with the image above as a starting point, the beats would only match for a short period of time; quite soon the beats in player B will be heard later than the one in player A. To correct this you would need to raise the playback BPM of player B.

The last image of the Beat Matcher shows a situation where the tempo of both players is the same and where the beats are aligned: both tracks are now synchronised.

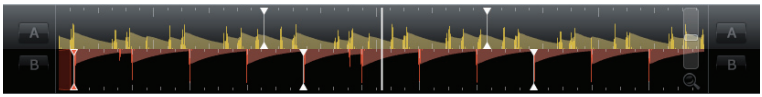


However, the peaks view gives us no information whether the downbeat of the track in player A and the downbeat of the track in player B are audible at the same time. This information can be made visible by enabling the beatgrids for the Beat Matcher.

Beatgrids of the Track

With the introduction of the beatgrid features you can additionally display the beatgrid of the track on the HUD as well. To make the beatgrid visible, active option **Show Beatgrids** on the **Display** tab of the **Preferences** dialog. (Please note, that this option makes the beatgrid visible on the HUD and on the waveform of the players.)

The long vertical lines with the yellow triangles at their endpoints represent the first downbeat of a 4 bar (=16 beats) cycle. All other long vertical lines represent the downbeat of bar (i.e. the first beat of a 4 beat bar).



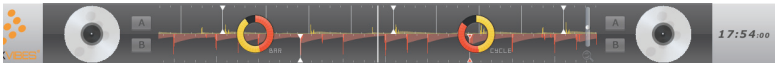
The shorter lines that you see at the top and the bottom of the peak display represent either another beat or a fraction of one beat. The number of shorter lines that are shown varies depending on the zoom factor that you have set with the Zoom slider at the right side of the Beat Matcher.

Sync-Meters

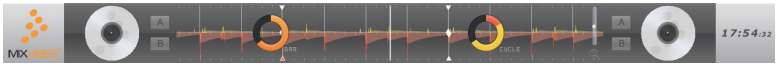
A new feature are the two Sync Meters on the HUD that you can enable with option **Show Sync-Meters** on the **Display** tab of the **Preferences** dialog.

The Bar Sync Meter at the left side informs you about the current playback position of a track related to one bar: for each beat in one bar one quarter segment of a cir-

cle is drawn. The yellow meter shows the playback position of player A and the red meter shows the playback position of player B. As long as the playback position of both tracks are not in sync related the one bar, you see the two overlapping circles as shown in the following figure:

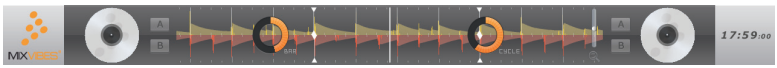


Once both players are playing the same beat of a bar, then the bar sync meter draws one orange circle. This is shown in the following figure:



If you take a look at the peaks view (with beatgrid display enabled), you can see that the long vertical lines representing the downbeats are now vertically aligned. The bar sync meter and the peaks view show the same kind of information and you can decide which one you wish to use to get your tracks synchronized.

At the right side of the HUD you can see the cycle sync meter. The cycle sync meter shows whether the two tracks are playing the same beat of the same bar, in relation to a cycle of four bars/16 beats. Imagine a beatcounter that uses the following format to display the current playback position: Cycle.Bar.Beat. If the playback position of player A is x.3.2 and the position of player B is x.3.4, then they are not in sync in relation to the bar and beat number. For this scenario the Cycle meter will draw one yellow circle for the position of player A and one red circle for showing the position of player B. In the Cycle meter each quarter segment represents one bar; this means that one full circle is equal to four bars.



Once the number of the bar and the number of the beat of both players are same, then the Cycle meter will draw one orange circle only. If the cycles of the two tracks are in sync, then the beats in a bar are also in sync. This means that the bar sync meter will draw an orange circle to.

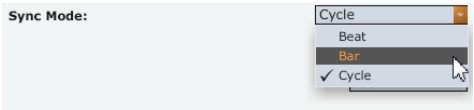
The introduction of the three different synchronisation modes in CROSS can help you, to get both tracks automatically synced.

Setting the Synchronisation Mode

If you press the **Sync** button on the players in CROSS, the software always performed a beat synchronisation; resulting in the beats in both tracks are played back at the same time.

With the introduction of the beatgrid it is now possible to select between three different synchronisations. The selected sync mode defines what will happen when you press/click the **Sync** button. In order for this to work the tracks in both players do need a beatgrid.

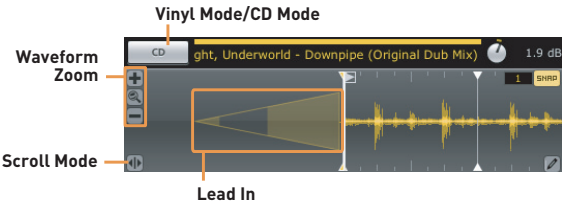
You can configure the sync mode of CROSS by opening the **Preferences/General** tab and select the desired mode in list **Sync Mode**:



- **Beat** If you select **Beat** mode, then pressing **Sync** only syncs to the other player's beat. Both tracks are then running beat or phase synchronous.
- **Bar** If you select **Bar** mode, then pressing **Sync** synchronizes the track in the player to the same beat number in a bar that is playing in the other player. Both tracks are running bar synchronous.
- **Cycle** If you select **Cycle** mode, then pressing **Sync** synchronizes the track in the current player to the same bar and the same beat number in a cycle that is playing in the other player. Both tracks are running cycle synchronous.

7.9 Customising the Players

You can customise the players to make them better fit to your needs. Some of the options are available in the user interface.



Waveform Zoom Use the three buttons at the outer side of the waveform to zoom in, to zoom out and to reset the zoom to the default value.

Waveform Scroll Mode In the default setting the playback maker on the waveform is at a fixed position and the waveform moves underneath it during playback. Click the **Waveform Scroll Mode** button, if you want the playback marker to move and the waveform to be fixed.

Vinyl Mode/CD Mode Use this button to activate Vinyl mode. In Vinyl mode you can use the jogwheel of U-MIX CONTROL PRO/U-MIX CONTROL 2 to scratch your

media. To activate Vinyl mode you can use the Vinyl button available on both controllers as well, or use the V key, to toggle the Vinyl mode of the active player.

More player related settings can be found on the **General** tab and on the **Display** tab of the **Preferences** dialog.

Lead In/Lead Out Use the two sliders **Lead In** and **Lead Out** on the **General** tab to set the length of the Lead In and the Lead Out Marker.

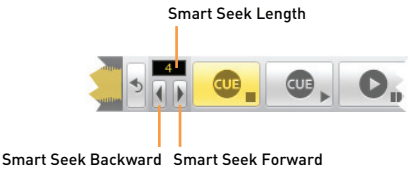
End of Track Alarm Use this slider on the **Display** tab to set the remaining play time of a track, during which the full track display shall blink red to warn you, that you will soon reach the end of the track.

7.10 Moving in a Track

You have several options to change the playback position of a track:

- Click into the waveform or into the full track display. Playback continues from where you clicked.
- Use the jogwheel of U-MIX CONTROL PRO/U-MIX CONTROL 2 to seek through the track as long as the track is not playing. Holding the SHIFT button on the controller seeks through the track at a higher speed.

You can use the Smart Seek controls to perform a beat jump forward in a track. The Smart Seek controls reside in the transport section of the players. Click the **Smart Seek Length** indicator to select the seek length (in beats or fractions of a beat). Then click either on **Smart Seek Backward** or on **Smart Seek Forward**.



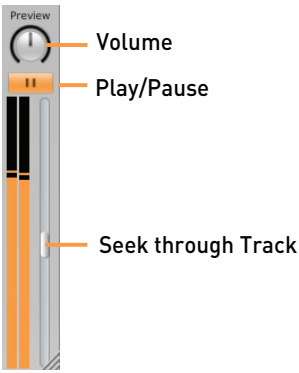
The Smart Seek actions can be performed with the keyboard and with U-MIX CONTROL PRO/U-MIX CONTROL 2 as well:

Action	U-MIX CONTROL	Windows	Mac OS X
Select Length	(press)	—	—
Smart Seek Backward	(turn left)	Alt + ←	Alt + ←
Smart Seek Forward	(turn right)	Alt + →	Alt + →

7.11 Using the Preview Player

If you have two tracks playing at the same time and are not sure, which track to play next, you can use the preview player to help make your selection.

Press the **Play/Pause** button to start playback of the track that is currently selected in the browser. Use the **Seek** slider to move through the track: the top of the slider represents the beginning of the track.



The **Volume** knob allows you to change the volume level of the preview deck. If you use CROSS DJ in internal mixer mode, the audio of the preview player is sent to the Cue/Monitor output you configured. In external mixer mode you would need a mixer with three channels and an audio interface with three stereo outputs, as the audio of the preview player is sent to the Cue output, which is routed to the outputs configured as **Output 3** (**Preferences/Audio** dialog).

8/ Organizing your Music with the Browser

The lower part of the CROSS DJ window contains the browser. You can use the browser to organize your music, to search for tracks and to create and use playlists. You can use the following audio file formats with CROSS DJ/CROSS DJ LE: MP3, AIFF, WAV, OGG, FLAC, M4A and AAC.

Before you can work with the audio files in the browser you need to import them into the collection. The steps for importing tracks are explained in the sections on page 63and onwards.

8.1 Overview of the Browser

The browser section of CROSS DJ has two main panels: the dock panel and the browser panel itself. The dock and its buttons allow you to open quickly different views of your media. The main part of the browser section shows all media inside the list that you have selected by clicking its button in the dock.

8.2 The Dock

The dock is the central component of the track management as it allows you to open different views or different locations by clicking the corresponding button. The dock can be customized: you can add buttons, remove buttons and change their order.

By default the dock contains the following standard tabs:

- **Collection** Opens the Collection list. The Collection list contains all tracks that you have added to your collection. Additionally all your Playlists and Smartlists reside here.

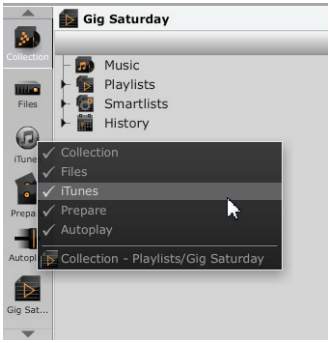
  The History node contains information about the sets you have previously played. The lists inside the **History** node are organized by year and month and you will find a playlist for each session inside the month node. You can change the naming pattern by opening the **Preferences/General** dialog and entering a new pattern into the text box **History Node Naming Pattern**. If you hover over the text box CROSS DJ displays the placeholders that can be used in the pattern.

- **Files** Opens a list with all local and remote drives and folders of your computer.
- **iTunes** Opens the iTunes library on your computer including all playlists that you have created in iTunes.
- **Prepare** The **Prepare** button opens the Prepare window which is a holding area for tracks, similarly to when a DJ sifts through records in a record bag. You can use the Prepare window to either prepare a set or to add tracks that you may wish to play through the course of your gig. You can drag tracks or complete folders from the track browser onto the **Prepare** icon in the dock. To create a playlist from your Prepare list, right-click the tracks and select **Add to New Playlist**.
- **Autoplay** The Autoplay list is a special playlist and can be used to let CROSS DJ mix the tracks for you. More information can be found on page 101.

Organizing and Customizing the Dock

The dock can be customized in various ways:

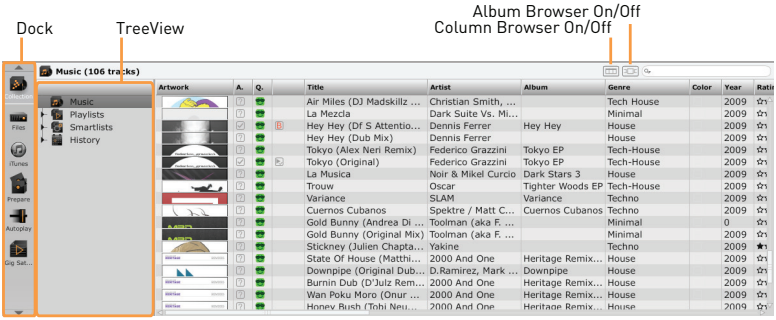
- Drag a button in the dock to a new position if you wish to change the display order of the buttons.
- Drag a button out of the dock to remove it.



- Right-click on the dock to open the context menu.
- The upper part of the context menu contains all default lists. Click on a menu entry to show/hide the corresponding button in the dock.
- The lower part of the context menu contains all user-defined entries/lists. Click the name of an entry to remove its button from the dock.
- Drag any playlist, smartlist or folder from the browser tree and drop it on the desired position on the dock to add a user-defined button.

8.3 The Browser Panel

In the default setting the browser area contains a tree view and a list view of the element you opened by clicking its button in the dock.


Dock
TreeView
Album Browser On/Off
Column Browser On/Off
Music (106 tracks)
Music
Playlists
Smartlists
History
Artwork
A.
Q.
Title
Artist
Album
Genre
Color
Year
Air Miles (DJ Madskillz ... Christian Smith, ... Tech House 2009
La Mezcla Dark Suite Vs. Mi... Minimal 2009
Hey Hey (Df S Attentio... Dennis Ferrer Hey Hey House 2009
Hey Hey (Dub Mix) Dennis Ferrer House 2009
Tokyo (Alex Neri Remix) Federico Grazzini Tokyo EP Tech-House 2009
Tokyo (Original) Federico Grazzini Tokyo EP Tech-House 2009
La Musica Noir & Mikel Curcio Dark Stars 3 House 2009
Trouw Oscar Tighter Woods EP Tech-House 2009
Variance SLAM Variance Techno 2009
Cuernos Cubanos Spektre / Matt C... Cuernos Cubanos Techno 2009
Gold Bunny (Andrea Di ... Toolman (aka F. ... Minimal 0
Gold Bunny (Original Mix) Toolman (aka F. ... Minimal 2009
Stickney (Julien Chapta... Yakine Techno 2009
State Of House (Matthi... 2000 And One Heritage Remix... House 2009
Downpipe (Original Dub... D.Ramirez, Mark ... Downpipe House 2009
Burnin Dub (D'Julz Rem... 2000 And One Heritage Remix... House 2009
Wan Poku Moro (Onur ... 2000 And One Heritage Remix... House 2009

The list that is shown at the right side of the browser panel contains all tracks of the currently selected folder, playlist, or any other element that has been selected in the treeview. When a track contains meta information, those are shown in the list. If no meta information is available then the filename is shown.

You have several options to change and configure the list view:

- **Sorting the list** Click on one of the column headers to sort the list by this column. The label of the clicked column will then contain a little arrow showing the sort order (ascending/descending).
- **Selecting columns** Right-/ctrl-click on the name of one of the columns. CROSS DJ opens a list with all available columns. Click the name of the column you wish to show/hide.
- **Changing the order of the columns** Click one of the column headers and drag it to another position to change the order of the columns.

The first column titled **A.** that you see in the previous figure informs you about the analysis status of the track. Here you will see a question mark if the track is not yet analysed. A check mark tells you that analysis has been done.

The second column indicates the quality of the track by the following icons:

Icon	Quality	AAC	MP3, WAV, AIFF etc.
	Perfect	Bitrate >= 256 kbps	Bitrate >= 320 kbps
	Great	Bitrate >= 192 kbps	Bitrate >= 256 kbps
	Good	Bitrate >= 160 kbps	Bitrate >= 192 kbps
	Average	Bitrate >= 96 kbps	Bitrate >= 128 kbps
	Poor	Bitrate >= 64 kbps	Bitrate >= 96 kbps
	Buggy	Bitrate < 64 kbps	Bitrate < 96 kbps

The third column from the previous browser image contains information about the status of the track. Here you can see if the track is loaded into player A or player B, if the track has been played after you have launched cross or the status of the track analysis and if the track is currently being analysed.

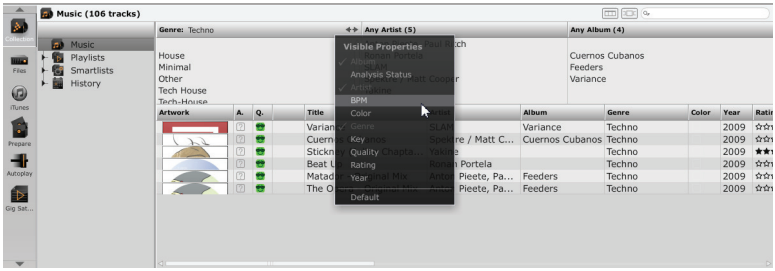
The Title Bar

The title bar shows the current node name, the number of tracks, and it contains the search field and two buttons to open and close additional panels.

The Column Browser

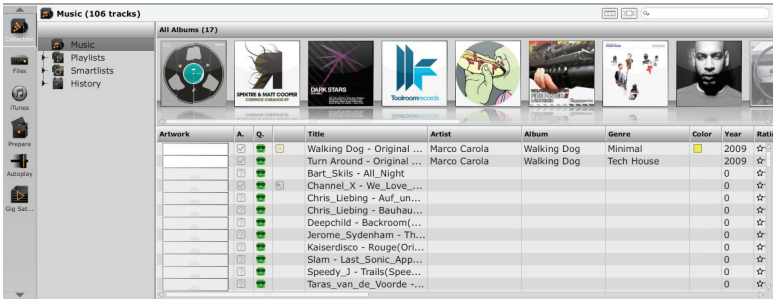
Click the **Column Browser** button in the title bar to open the Column Browser panel. In the default setting the column browser groups the tracks by three different properties that CROSS DJ extracts from the media files: Genre, Artist and Album. You can refine and filter the list view by clicking an entry in any of the property lists. To remove a property selection, click the X in the title bar of the property list.

Right-click any of the title bars to open the **Visible Properties** menu. Here you can select another property for that list or you can click on **Default** to return to the standard setting with the Genre, Artist and Album properties. You can drag and drop the property header to change the order of the browsing columns.



The Album Browser

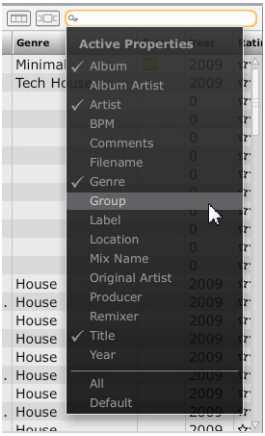
If is easier for you to remember an album cover than the track name or artist, you can open the Album Browser by clicking the third button in the title bar. If the Column Browser is currently open, the attributes and the album covers also serve as filters. To see all album covers you either need to close the Column Browser or to deselect all currently activated properties. If you click on one of the covers, all tracks of the selected album are shown in the list.



8.4 Searching for Tracks

Another way other than using the filter functionality of the Columns Browser and Album Browser is entering the search criteria direct into the **Search** field, that sits at the right side of the title bar. Entering search words triggers a dynamic search in your collection, i.e. CROSS DJ displays all tracks found that match the search criteria entered so far.

In the default setting CROSS DJ searches in the Album, Artist, Genre and Title properties of your tracks. You can change the properties that CROSS DJ should search in by clicking on the magnifying glass at the left side the **Search** field; this opens the **Active Properties** menu.



- Click on one of the properties, to include/exclude it from the search.
- Click on **All** to have CROSS DJ search in all available properties.
- Click on Default to restore the default property selection that is shown in the previous image.

8.5 Using Playlists and Playlist Folders

Playlists can help you to prepare for a gig or to organize your music collection. You can create playlists from scratch or use the playlists that you may have already made in iTunes. Playlists are created in the Playlists node of your collection. As with iTunes, this node can contain folders as well as playlists. This makes it possible to organise playlists hierarchically.

Creating Folders

To create a playlist folder, follow these steps:

1 Click the **Collection** button in the dock.

2 If you wish to create a folder at the highest level right-/ctrl-click the **Playlists** node. If you wish to create a folder at a lower level right-/ctrl-click the parent folder.

3 Select **Create New Folder** from the context menu.

A new folder with the name "Untitled Folder" is created and the name is selected.

4 Enter the desired folder name and press [↵].

NOTE If you want to change the name of an existing folder, double-click the name to enter edit mode, make your changes and press ↵.

Creating an Empty Playlist

To create an empty playlist, follow these steps:

1. Click the **Collection** button in the dock.
2. Open the **Playlists** node if necessary.
3. If the new playlist is to reside in **Playlists** node, right-/ctrl-click node. If you wish to create the playlist inside a playlist folder, right-/ctrl-click this folder.
4. Select Create new Playlist in the context/action menu.

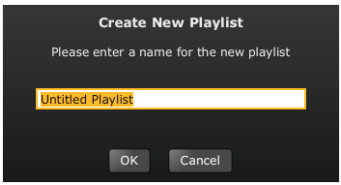
   A new playlist with the name "Untitled Playlist" is created and the name is selected.
5. Enter the desired playlist name and press ↵.

NOTE If you wish to change the name of an existing playlist, double-click its name to enter edit mode, make your changes and press ↵.

Creating a Playlist from inside the Listview

If you are currently in Listview and see some tracks that should be at the beginning of a new playlist, proceed as follows:

1. Select the track or tracks in Listview.
2. Right-click the selection and choose **Add to new Playlist**. CROSS DJ opens the following window:



3. Enter a name for the playlist and click **OK.**

   The new playlist is created and the selected tracks are added to the playlist.

Importing a Playlist from iTunes

If you have already created a playlist in iTunes you can import the list easily into CROSS DJ by proceeding as follows:

1. Click the **iTunes** button in the dock.
2. Right-/ctrl-click the iTunes playlist that you wish to import.
3. Select **Export to Playlists** to put the playlist directly below the CROSS DJ **Playlists** node.

   Or:

   Select **Export to Playlists Folder** and select the folder to where the iTunes playlist shall be exported.

Adding, moving and deleting Tracks

Tracks can be added to a playlist by selecting them in the Listview, then by dragging them onto the playlists' icon in the Treeview. If you have added a playlist button for the target playlist to the dock, you can drag and drop the selected tracks onto this button.

Another way to add tracks to a playlist is by using the context menu in Listview. Select the track/s you want to add to an existing playlist. Then right-/ctrl-click the selection. Click **Add to Playlist** and then select the desired playlist in the submenu of this command.

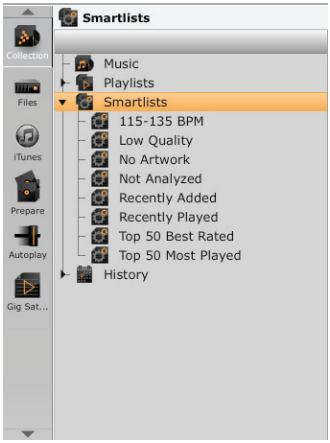
New tracks are always added at the end of the playlist. To change the order of the tracks in a playlist use drag & drop.

To delete a track from a playlist, right-/ctrl-click the track and choose **Remove from Playlist.**

8.6 Using Smartlists

Smartlists are another useful feature that helps you organizing and finding your tracks. Smartlists are filters that are applied to your collection. A smartlist filter can contain one or more conditions. Most of the conditions that can be used query the meta information of your tracks, like the title, artist or tempo. Other conditions query data that is stored in your collection, like the date the track was added, for example.

CROSS DJ/CROSS DJ LE contains several pre-defined smartlists. To see which smartlists are available, click the **Collection** button in the dock and then open the **Smartlists** node in the treeview.

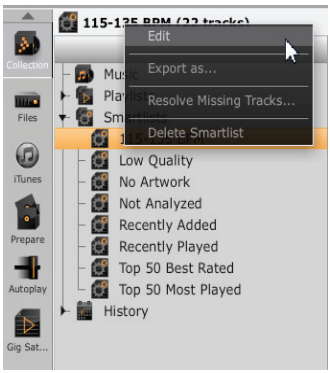


Click on one of the smartlist names. The filter contained in the smartlist definition is applied to your collection and the resulting tracks are shown in the listview panel of the browser.

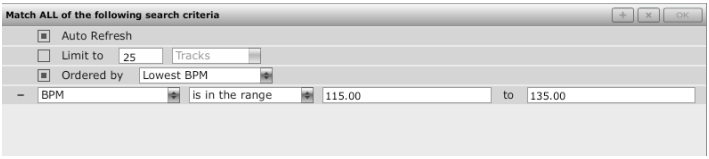
Let's have a look at the inside of one of the pre-defined smartlists. This will help you to define your own smartlists.

1 Right-/ctrl-click on the smartlist **115–135 BPM**.

2 Click **Edit** in the contextmenu.



CROSS DJ opens the panel with the smartlist editor.



Filter Type: ALL or ANY

Have a look at the title bar of the smartlist editor. The title reads "Match ALL of the following search criteria". CROSS DJ supports two different types of smartlist filters. For the type that is used here, all of the defined search criteria must be met for a track to be displayed in the search results.

For the second type you will read "Match ANY of the following search criteria" in the title bar. With this type only one of the defined conditions must be met for a track to be displayed in the search results.

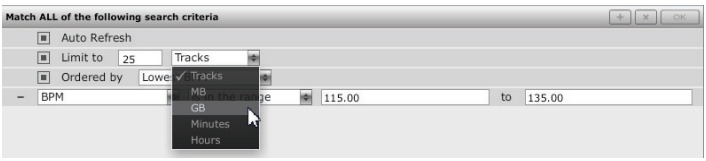
You can simply change the filter type by clicking the title bar of the smartlist editor.

Standard Options for Smartlists

The first three rows shown in the previous figure are standard options that are available in all smartlists. The checkbox at the very beginning of the row must be activated; otherwise the option is not applied.

Activate **Auto Refresh** if CROSS DJ is to update the search results while you are defining the search criteria. If **Auto Refresh** is deactivated, the search results will not update until the next time the smartlist is opened.

You can use the second row, **Limit to**, to limit the search results. As well as the number of tracks, you can set a limit by file size (in MB or GB), or you can define a limit of the total playing time of the tracks (either specified in minutes or hours). You define a limit by opening the list box to select the criteria. Then enter the desired value into the text box of that row.



3 Change the number of tracks from 25 to 40.

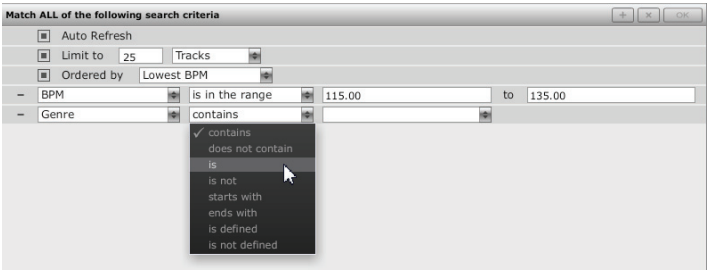
4 The last standard option is the sort order. Open the list box **Ordered by** in the third row to get an idea of the available options.

5 All other rows contain the criteria that shall be used for this smartlist. In this example the BPM of the track shall be used, and the BPM must be in the range from 115 to 135. Open the listbox where currently **BPM** is selected to get an idea of the information fields that can be used.

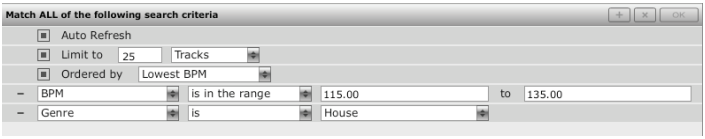
6 Click the button with the **Plus** sign in the title bar of the smartlist Editor. A new row is added at the bottom of the editor. We want to refine this smartlist and add a criteria that filters all House tracks.

7 Open the first listbox and select **Genre**.

8 Open the second listbox and select **is**.



9 Open the third listbox and select **House**.



If there are tracks in your collection that meet both criteria they are now shown in the Listview.

10 Click the title bar to change the filter type from ALL to ANY.

Now the Listview will show all tracks where the genre is house or where the BPM of the track is inside the defined range.

11 Click the **Minus** button in front of the **Genre** row. The row is deleted.

12 Click the **OK** button in the title bar to close the smartlist editor.

NOTE The button with the x in the title bar of the smartlist editor removes all criteria.

Creating a New Smartlist

Smartlists are created in a similar way as playlists.

1 Opening the collection by clicking the **Collection** button in the dock.

2 Right-/ctrl-click the **Smartlists** node and select **Create New Smartlist** if you wish to create a new smartlist. CROSS DJ creates a new smartlist with the name "Untitled Smartlist". The name is selected and you can edit it.

> **NOTE** If you wish to create a new folder node first, click **Create New Folder** and then use the command to create a new smartlist.

3 Enter the desired name for the new smartlist and press [↵].

4 Define the criteria for the new smartlist as shown in the previous section.

8.7 Viewing and Editing Track Meta Information

Most of the audio file formats that can be used with CROSS DJ allow the storage of meta information about the file, like the artist or the release date of a track. You can view and edit this meta information in either Listview or in the Info panel of the browser.

CROSS DJ can write the changes you make either to the collection file only, or to the collection file and to the tags of your audio track. You can configure whether CROSS DJ shall write the changes to the file tags or not on the Preferences/General dialog by checking or un-checking the option **Do not save changes in Tags**.

To make changes in Listview double-click the field you want to edit, enter your changes and press [↵]. Some of the fields in Listview provide a listbox where you can select one of the options. Other fields, like the audio format, are static, and cannot be changed.

Another option is to use the Info panel of the browser to see all available information about a track and to make changes to a track. Select the file you want to edit and click the **Info** button in the tool dock at the right side of the browser area.

The information about the selected track is grouped in categories. Click one of the category names to see detailed information about this category. Please note that like in Listview, not all fields can be edited.

You can use the Info panel to add a cover image to a track. Click the ellipsis button, select the image file, and click **Open**. If you want to delete a cover image, click the **Delete** button (with the x) that is visible below the cover art.

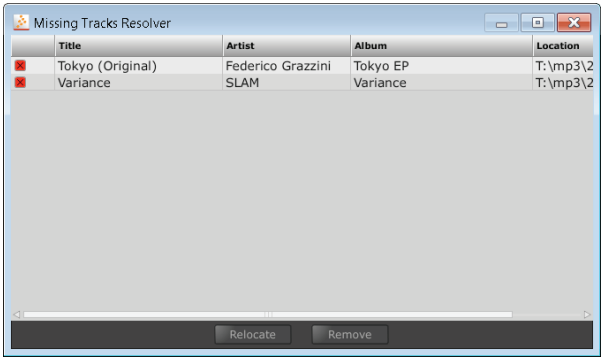
As well as the "standard" tags for audio files, CROSS DJ allows you to attach a colour category to a track. Click the grey square in the **Labels** section (or click the corresponding square in Listview), to open a listbox with the colours available. You could use one colour for warming up tracks, another colour for peak-time tracks or whatever kind of category you need.

8.8 Locating Missing Tracks

If you move tracks from one folder to another or if you have changed the filename of a file that is already in the collection, CROSS DJ will no longer be able to find the track. The Status column in the Listview then shows a red warning icon, like the one you see in the following image.

Right-/ctrl-click this row and select **Relocate** from the context menu. Browse to the new file location, select the audio file and click **Open**.

If there is more than one track missing it is easier to use the Missing Tracks Resolver: Open the **File** menu and click **Resolve all missing tracks**. The **Missing Tracks Resolver** window is opened.



Select the file you wish to relocate, click **Relocate** and browse to the new location of the file. If you can no longer find the missing files, click **Remove** to delete the file from the collection.

8.9 Using more than one Collection

In the default setting you will organize your tracks and audio files by using one collection. However, if you use a great number of audio files, and if want to organize them into different collection files, you can do this easily.

Creating a new Collection

Follow these steps to create a new collection:

1. Open the **File** menu and click on **Create Collection**, or press the shortcut Ctrl + N (Windows) or cmd + N (Mac). **The Save new collection to** dialog is opened.
2. Enter the name of the new collection.
3. Click **Save**.

   The new collection is created. CROSS DJ will open the new collection automatically.

TIP If you wish to save the open collection with a different name, open the **File** menu, click **Save collection as** and enter the new filename for the current collection

Opening another Collection

Perform one of the following actions to open another collection:

- Open the **File** menu, click on **Recent Collections** and click on the name of the collection, you wish to open.
- Open the **File** menu and click on **Open Collection** or press the shortcut Ctrl + O (Windows) or cmd + O (Mac). Select the collection file in the **Open** dialog and click **Open**.

NOTE On launch, CROSS DJ will automatically open the collection file that was last used.

8.10 Optimizing the Collection Database

CROSS DJ stores all tracks and all playlists of your collection are stored in a database file. When you make bigger changes to your collection, for example deleting multiple files, the database file can become fragmented. If the database file is fragmented it takes a bit longer to access your collection.

You can defragment and optimize your collection by opening the **File** menu and selecting **Optimize collection**.

9.1 Using the Pitch Controls

Each CROSS player has its own pitch fader that works in a similar way as the pitch faders you know from a turntable or CDJ player. The main difference of the CROSS pitch faders is that they offer three different pitch modes: Speed, Tempo and Hybrid.

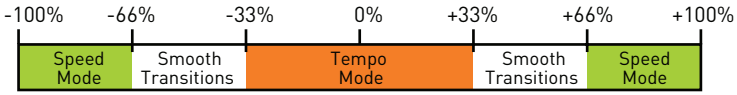
Selecting the Pitch Mode

Perform one of the following actions to set the pitch mode:

- Click the **Mode** button in the upper part of the pitch section. The Mode button is labelled with the currently selected pitch mode (i.e. Speed, Tempo, or Hybrid).
- If you are using the U-MIX CONTROL 2 or U-MIX CONTROL PRO controller press the Mode button above the pitch fader.
- Press [⇆] to switch to the player; then press [P].

What are the differences between the three pitch modes:

- **Speed** In Speed mode you can change the pitch like you would do with a normal DJ turntable. Changing the tempo of the player changes the pitch of the audio as well.
- **Tempo** In Tempo mode you can change the playback tempo without affecting the tone pitch. The Tempo mode thus has a similar effect as the Master Tempo mode that is available with several CDJ-Players.
  In Tempo mode CROSS uses a time stretching engine, which allows playback of audio at different tempos without changing the tonal key. When Tempo mode is activated, the Pitch fader is no longer a pitch fader but more a tempo fader, because a tempo change will not affect the pitch.
- **Hybrid** Hybrid mode is a combination of Speed and Tempo mode as it considers the percentage speed change.

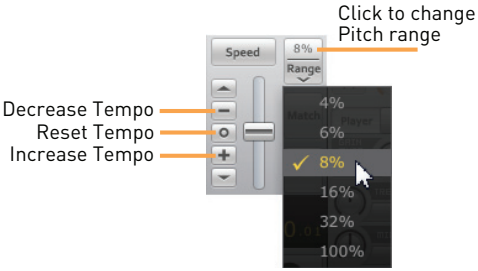


In the range from –33% to +33% the fader behaves like Tempo mode. Below -66% and above +66% the fader behaves like Speed mode. In the range from –66% to -33% and between +33% to +66% the pitch is gradually increased or decreased to smooth the pitch transitions. This mode delivers great results as you get the best from Speed mode and Tempo mode. The sounds stays more natural at extreme speed values, and you have a wide constant-pitch range around 0% speed.

If one of the modes that provide the key locking is activated, then the Key Lock icon at the side of the waveform is highlighted.

Changing the Tempo with the Pitch Fader

You can use the pitch faders or the Plus, Minus and Reset button in the Pitch section of the player to change the playback tempo. The pitch range can be set with the **Range** button on the Pitch section. If you use either U-MIX CONTROL PRO or U-MIX CONTROL 2 hold the SHIFT button and press the MODE button to change the range of the pitch slider.



CROSS offers five different ranges and the range can be set individually for each player. For example, if you select 16% and if the original tempo of a track in a player is 125 BPM, then you can increase or reduce the tempo maximum by 20 BPM.

The Minus and Plus buttons next to the pitch fader can be used to change the tempo stepwise. The tempo is changed in smaller increments if you hold the ⇧ key while clicking the button; you get larger increments if you hold the ctrl key. Click the Reset button (or press ⇧ + 0)to set the tempo back to the original BPM of the track.

The two tempo fields below the Pitch section always show the current tempo as BPM value and the percentage difference to the original BPM:

Pitch Bending

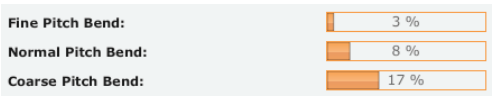
Two of the buttons in the Pitch section can be used for pitch bending. These buttons temporarily slow down (▲) or speed up the tempo (▼).

As soon as the buttons are released the previous tempo is restored. This corresponds to nudging a spinning record on a turntable and to the two pitch bend buttons found on CDJs. On a technical level pitch bending is used to move the phase of a player. You may need this to get the beats of two tracks in sync, once they playing at the same tempo.

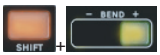
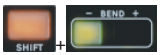
The acceleration and deceleration factor is always relative to the current tempo of the deck. CROSS DJ provides options to configure three different percentage values, fine, normal and coarse which allow you to pitch bend.

Follow these steps to configure the three pitch bend factors:

1. Go to the menu and click **File/Preferences**. Make sure that the **General** tab is open
2. Use the three sliders to set the set the pitch bend factors for the different ranges. Please note: The factor for Fine Pitch Bend must be smaller than the one for Normal Pitch Bend and the factor for Normal Pitch Bend must be smaller than the one for Coarse Pitch Bend.



Pitch bending can be done with the U-MIX CONTROL controllers, in the CROSS players with the mouse and with keyboard shortcuts, as the following table shows.

Action	U-MIX CONTROL	Player/Mouse	Keyboard
Normal Up			D
Normal Down			E
Fine Up		⇧ +	⇧ + D
Fine Down		⇧ +	⇧ + E
Coarse Up	–	Ctrl / cmd +	Ctrl / cmd + D
Coarse Down	–	Ctrl / cmd +	Ctrl / cmd + E

9.2 Snapping Loops, Locators and Cue Points

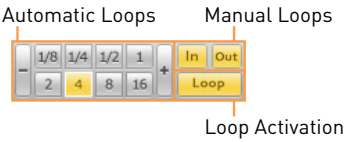
With the beatgrid feature loops, locators, and cue points can be set either at the current playback position or they can automatically snap to the next beat, next 1/2 beat, next 1/4 beat or next 1/8 beat of the tracks' beatgrid.

To enable the snap feature for one of the players, click the **Snap** button on the player. You can set the snap value by clicking the **Snap Length** indicator next to the **Snap** button.

CROSS DJ stores the status of the **Snap** button when you exit CROSS DJ and restores it on the next launch.

9.3 Looping

CROSS DJ allows you to set loops in your tracks on the fly. You can either use the automatic loop feature with one of the predefined standard loop sizes or you create manual loops by setting the loop IN point and the loop OUT point.



Using Automatic Loops

Each CROSS player contains a loop section below the waveform. You can use the loop section to set the length of automatic loops and to activate the loop at the same time. CROSS provides several default loop sizes, ranging from 1/8 beat up to 16 beats.

Follow these steps to create an automatic loop:

1. Make sure that the loop section is visible below the player. If you cannot see the loop section drag the separator line below the players to make space for the loop section.
2. Perform one of the following actions:
   - Click the button with the desired loop length.
   - Press [⇆] to activate the player with the track you wish to set the loop. Press [J] and [K] until the button with the desired loop length is highlighted with a frame. Press [U] to activate the auto loop.
   - Turn the Loop encoder on the U-MIX CONTROL controller to select the desired loop length. Press the Loop encoder to activate the loop.

CROSS sets the loop start point at the current position of the playback marker, if Snap is disabled, or snaps it to the currently selected snap length, if Snap is enabled. Then the loop is activated.

The button with the selected loop length is highlighted. The Loop button in the Loop section is highlighted as well, showing you that a loop is active.

On the waveform the section of the track that is looped is highlighted with a white triangle. In the full track display the looped part is shown in a bright colour and the rest of the track in a dark colour.

3 While the loop is active you can:

- Change the loop length, by using the [J] and [K] keys, or by clicking one of the other buttons in the loop control, or by turning the Loop encoder on your U-MIX CONTROL controller.
- Deactivate the loop either by using the [L] key, or by clicking the **Loop** button or by pressing the Loop encoder on your U-MIX CONTROL.

Using Manual Loops

The length of manual loops can be set as needed. To create a manual loop you need to define a loop in point as well as a loop out point.

1 Move the waveform to the position of the desired loop in point, or wait until playback reaches the position, where the loop in point shall be set.

2 Click the **In** button or press the [I] key.

3 Move the waveform to the position of the desired loop out point, or wait until playback reaches the position, where the loop in point shall be set.

4 Click the **Out** button or press the [0] key.

The looped section of the track is marked in the waveform and in the full track display. Additionally the loop is activated: the Loop button is now highlighted.

Once they are created manual loops behave in the same way as automatic loops. To change the loop size of a manual loop you can either set a new loop out point or move the current one. This is explained in the next section.

Moving the Loop

Sometimes you will find that the loop is not exactly where you want it. The Smart Seek feature of CROSS DJ makes it easy to move an activated loop:

1 First you need to define the Jump length by performing one of the following actions:

- Click the Smart Seek Length display until the desired jump length is shown.
- Hold the SHIFT button on your U-MIX CONTROL controller and press the Loop encoder until the desired jump length is shown in the Smart Seek Length display.

2 Now you can move the loop by performing one of the following actions:

- Click the Smart Seek Backward or the Smart Seek Forward button.
- Press [Alt]+[←] to move the loop towards the begin of the track or press [Alt]+[→] to move it towards the end of the track
- Hold the SHIFT button on your U-MIX CONTROL controller and turn the Loop encoder.

TIP Use the loop feature together with the locators that are explained in the next section: set a locator at a point that you want to use as the loop in point, jump to that locator and finally use one of the auto loop buttons to activate the loop.

9.3 Using Cue Points

If you load a track for the first time, CROSS DJ will create a cue point at the beginning of the track. The cue point is symbolised on the waveform and in the full track display by a cue marker, which looks a little bit like a flag on a flagstaff.

You can use the Cue/Stop and Cue/Play button to start the playback at the position of the cue point and to set the cue point position.

Setting the Cue Point

Use the **Snap** button and the **Snap Length** selector on the player to enable/disable the Snap feature. Then perform one of the following actions to set the position of the cue point::

- Click the **Cue/Stop** button while the track is paused.
- Press the shortcut ⇧+C.
- Hold the **SHIFT** button on U-MIX CONTROL PRO/U-MIX CONTROL 2 and press the **CUE** button while the track is playing. When the player is paused press the **CUE** button. (Note: **SHIFT+CUE** also works.)

TIP The last cue point that you set in a track is stored in the peak files automatically.

Jumping to Cue Point and start Playback

Perform one of the following actions to jump to the cue point and to start playback:

- Click the **Cue/Play** button.
- Press the ↵ key.
- Hold the **SHIFT** button and press **PLAY/PAUSE** on U-MIX CONTROL PRO/U-MIX CONTROL 2 to activate Cue/Play from the controller.
- Hold the **CUE** button and press the **PLAY/PAUSE** button on U-MIX CONTROL PRO/U-MIX CONTROL 2. Playback will continue when you release both buttons.

Jumping to Cue Point and start Playback temporarily

Perform one of the following actions to jump to the cue point and to start playback. All actions set the play marker to the cue point position. The track is playing as long as the button/key is pressed. If you release the button/key, playback is paused and the play marker is set to the cue point position again.

- Click the **Cue/Stop** button while the track is playing.
- Press the shortcut [C], while the track is playing.
- Press the **CUE** button on U-MIX CONTROL PRO/U-MIX CONTROL 2 while the track is playing.

9.4 Using Locators (Hot Cues)

Several of the professional CDJ players allow you to store cue points in a track either on a memory card or in the memory integrated into the CDJ player. You can jump to a stored cue point – sometimes called hot cue – by pressing a button on the CDJ player.

CROSS DJ allows you to store cue points as well; stored cue points are called locators. Below the two players you can see the locator section that informs you of the number and the position of the locators in the currently loaded track.

Setting Locators and Jumping to Locators

Perform the following steps to set a locator:

1 Set the playback marker to the position where you wish to set the locator or wait until playback reaches the desired locator position.

2 Perform one of the following steps. Please note that you can set a locator only if the locator button is not yet used:

- Click **Loc 1** to set locator 1, **Loc 2** to set locator 2 etc.
- Use the [⇆] key to set the focus to the player where the you wish to delete a locator. Press [1] to set locator 1, [2] to set locator 2 etc.
- Press one of the locator buttons **1**, **2**, **3** on your U-MIX CONTROL to set Locator 1, 2, or 3. Press the **SELECT** button, and then press one of the locator buttons **1**, **2**, **3** to set locator 4, 5, or 6.

The position of the Locator (time) is shown on the locator button in the player.

The same keys/buttons can be used to jump to a locator, once it is set.

Toggle between Locators 1-3 and Locators 4-6

BUTTON ONLY: Set/Select Locator
SHIFT+BUTTON: Delete Locator

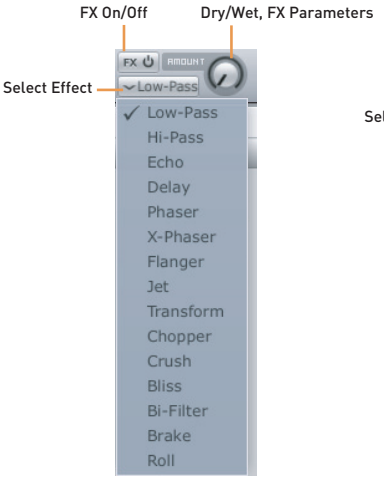
Deleting Locators

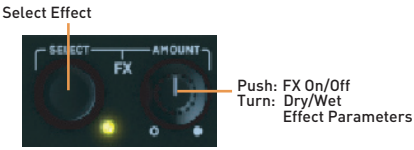
Perform one of the following actions to delete a locator:

- Click the **Delete** button (with the X) next to the locator that you wish to delete.
- Use the [⇆] key to set the focus to the player where you wish to delete a locator. Press [⇧]+[1] to delete locator 1, [⇧]+[1] to delete locator 2 etc.
- Hold the **SHIFT** button and press one of the locator buttons **1**, **2**, **3** on your U-MIX CONTROL to delete locator 1, 2, or 3. Press the SELECT button, hold the **SHIFT** button and then press one of the locator buttons **1**, **2**, **3** to delete locator 4, 5, or 6.

9.5 Effects

Each of the CROSS DJ players has its own dedicated FX section, where you can select the effect, switch it on and set all effect parameters with one knob. Also the U-MIX CONTROL PRO/U-MIX CONTROL have two FX sections with one push encoder and one knob each. This makes using the effects very easy.





To use an effect perform the following steps:

1. Select the effect by opening the **Effect** dropdown list and click the name of the effect. On your U-MIX CONTROL turn the **FX SELECT** knob until the effect name is shown in the FX section of the player.
2. If you wish to fade the effect signal into your mix, make sure that the **AMOUNT** knob is at the Min position.
3. Click the **FX On/Off** button on the player or press the **FX SELECT** encoder on your U-MIX CONTROL to activate the effect.
4. Turn the **AMOUNT** knob clock wise to make the effect signal and to change the effect specific parameters.

The **AMOUNT** knob controls the dry/wet ratio and the effect parameters. The common behaviour of the AMOUNT knob is, that at the min position only the dry signal (the original signal from the player) can be heard.

The following sections give you more background information about the various parameters, that the AMOUNT knob changes. To better understand this section, you may wish to load some tracks and play with the effects, while you are reading.

Low-Pass

Low-Pass is a Low-Pass filter (= High-Cut filter) that dampens the high frequencies, i.e. the low and the middle frequencies can pass through the filter.

The Amount knob controls the following filter parameters:

- In the first quarter range of the knob the dry/wet ratio increases up to 100% wet; the ratio stays at 100% in the remaining range of the knob.

- The cut-off frequency of the filter starts at 14 kHz and goes down to approximately 300 Hz the more you turn the Amount knob clockwise.
- The filter resonance starts at 70% and goes down to 0% the more you turn the Amount knob clockwise. The resonance values are equally distributed over the amount range.

Hi-Pass

Hi-Pass is a High-Pass filter (= Low-Cut filter), which dampens low frequencies, i.e. the middle and the high frequencies can pass through the filter.

The parameters for Hi-Pass that are set with the Amount knob are:

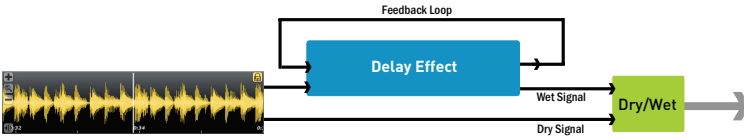
- The dry/wet ratio is always 100% wet, except at amount = 0.
- The frequency range that is filtered starts at 35 Hz, ends at about 3 kHz, and is equally distributed over the amount range.
- The filter resonance starts at 0,2 and goes up to about 0,5 over the amount range.
- The number of stages of the filter inside the Hi-Pass effect varies: Up to the middle position of the Amount knob three stages are used, with an Amount value between 50% and 60% four stages are used, and above 60% five stages.
- Additionally, a spreading parameter that increases all over the amount range, acts on the cut-off frequency differences between the stages.

Echo

The Echo and the Delay effect (see next section) are delay effects where copies of the original signal are inserted into the output. This results in an echoic impression. The FX Amount knob controls the dry/wet ratio and effect dependent parameters.

Let's have a look at the parameters for the Echo effect:

- The dry/wet range for Echo is 0% (only dry) to 100% (only wet).
- The delay time depends on the BPM of the player and is 1/2 beat in the amount range from 0–80%. Above 80% the delay time is shortened: first 1/4 beat, then 1/8, 1/16 and finally 1/32 beat when the Amount knob is at its maximum position. The delay time is not changed abruptly but slowly in the upper fifth position of the knob. Playing around in this knob range leads to very interesting accelerating delay effects, that sound similar to a tape delay.
- The feedback starts at about 25% and increases up to 63% all over the amount range. The feedback parameter controls how much of the effect signal is fed back into the effect. By feeding the effect signal back into the effect engine, the intensity of the effect is increased.



The Echo effect has a nice trail: keep the amount knob open and pause the player to hear it.

Delay

The Delay effect is the second delay effect in the CROSS FX suite; one of the main differences between Echo and Delay is that Delay uses a fixed delay time of 1/2 beat; the delay time is in sync to the tempo of the current track. Let's have a look at the parameters you can control with the FX Amount knob:

- The dry/wet range for Delay is 0% (only dry) to 100% (only wet).
- Delay uses a fixed delay time of 1/2 beat, which is controlled by the current playback BPM of the track.
- The possible feedback values range from 0% to 65% and are equally distributed over the knobs positions.
- Delay uses a low-pass filter on the effect signal. It kicks in when the Amount is at 80%. The start cut-off frequency is 14 kHz and it goes down to 500 Hz, the more the Amount knob is turned clockwise. At the same time the resonance (Q factor) of the filter increases. The resonance causes those tones near the cut-off frequency to be emphasized and the other tones to be attenuated. The effect of the filter is more prominent when the resonance is higher. Furthermore, with higher resonance values, filters tend to produce an oscillation by themselves; this effect is called self-oscillation and creates interesting sounds.

Phaser

The Phaser effect uses a phase-shifted copy of the input and mixes it with the original signal. When the original and the phase-shifted signal are combined it creates one or several notches in the frequency spectrum; those frequencies are eliminated in the output signal. This creates the typical frequency sweep of the Phaser. To get the phase shifted copy the signal is sent through an all-pass filter; this filter type lets all frequencies pass through, but it changes the phase response.

You can control the following parameters with the FX amount knob:

- The possible feedback values range from 0% to 75% and are equally distributed over the knobs positions.
- The depth can be set between 75% and 100%; the possible values are equally distributed over the knobs positions.

- The frequency sweep can be set between 434 Hz and 2020 Hz; the possible frequency values are also distributed over the knobs positions

X-Phaser

The X-Phaser effect is a variation of the Phaser effect. Unlike the Phaser effect, X-Phaser uses a fixed feedback value and the rate of the LFO used for the effect is beat-synced to the current playing track. Here are all parameters that can be controlled with the FX Amount knob:

- The feedback value is always 75%.
- The depth can be set in a range from 0% to 100%.
- The frequency sweep can be set between 80 Hz and 2020 Hz/6 kHz.
- The LFO rate is beat-synced: 16 beats until the Amount knob is in the middle position; 8, 4, 1 beat(s) when the Amount knob is between 50 and 75; and finally 1, 1/2, and 1/4 beat when the Amount knob is between 75 and 100.

Flanger

The Flanger effect adds a time-delayed copy of the original signal and the very short delay time continuously changes. Because the delay time is very short this isn't perceived as an echo. Instead the delay creates kind of a filter effect producing notches in the frequency spectrum. The result is that groups of frequencies are filtered. And because the delay time is changing those notches in the frequency spectrum change as well. This in turn creates the typical dynamic swirl effect of the Flanger.

Let's have a look at the parameters for the Flanger effect:

- The dry/wet is in fact replaced by an effect level whose value is 0% at min amount value and increases till 100% at the max amount value.
- Flanger uses a small feedback range: the minimum feedback value is 50% and it increases up to 66%.
- The LFO of the Flanger effect uses a saw-tooth waveform (always falling) and the oscillation cycle is dependent on the current playback BPM. Turning the Amount knob clockwise selects the following values: 1, 2, 4, 8, and finally 16 beats.

Jet

The Jet effect is a variation of the Flanger effect. Jet uses different presets of the parameters that can be controlled by the FX Amount knob:

- As for the Flanger effect dry/wet is replaced by an effect level which value is 0% at min amount value and increases till 100% at max amount value.

- The feedback value starts at about 50% and increases to about 80%, if you turn the Amount knob clockwise. With a higher feedback value the sound of the Jet becomes more metallic.
- The Jet effect uses a low frequency oscillator that creates a sinus waveform to modulate/modify the audio signal. The speed of the LFO is not BPM dependent and its range goes from 0.1 Hz to 5 Hz.

Transform

Transform is a tremolo-style effect: it repetitively changes the amplitude (level) of the player's audio signal. The change of the amplitude sounds as if the audio needs to pass a gate, those doors are rhythmically opened and closed. The depth parameter of the effect is always 100%.

You can change the following effect parameters with the Amount knob:

- The LFO uses a square waveform in the first 50% of the Amount knob; in the second 50% a sine waveform is used.
- The amplitude change is beat-synced to the tempo of the currently playing track. The rate is 2 beats when the knob is between 0 and 25; it is 1 beat between 25 and 50; it is 1/2 beat between 50 and 80; and finally 1/4 beats between 80 and 100. The shorter the chosen rate, the more often the level changes.

Chopper

The Chopper effect is an auto filter that allows you to control the LFO rate and the frequency ranges of the filter all with one knob. The Chopper effect uses a sine waveform to control the LFO. The following parameters are controlled with the FX Amount knob:

- The depth can be set in a range from 0 to 100%.
- The LFO rate can be set to a tempo between 0,76 Hz to 24 Hz.
- The low minimum frequency that is filtered can be set between 781 to 569 Hz.
- The low maximum frequency that is filtered can be set between 1480 to 2680 Hz.
- The high minimum frequency that is filtered can be set between 231 to 569 Hz.
- The high maximum frequency is fixed at 11900 Hz.

Crush

Crush is a distortion effect; changing the sample rate and the bit depth of the original audio signal creates the distortion. The FX Amount knob can control the following parameters:

- The filter resonance starts at 20% and can be increased to 25%.
- The down-sampling rate starts at 16 kHz (knob in the outermost left position) and it goes down to 722 Hz, the more you turn the Amount knob clockwise.
- The bit resolution changes from 32 bit down 11 bit on the first half position of the Amount knob. From the middle position up to the outermost right position of the Amount knob the bit depth changes from 11 down 10 bit.

Bliss

The Bliss effect is a white noise generator that is perfectly suited to build drama into a mix. When the amount knob is at the 0 and 100 position, the white noise is off. In the range from 1 to 99 the amount knob controls the following parameters of the white noise signal:

- The frequency of the white noise signal starts at 100 Hz and increase to 9 kHz.
- The filter resonance starts at 35% and goes up to 100%.
- The mix level of the white noise (level in relation to the audio from the player) starts at 100% then decreases at 50% when the knob position is at 92% (here the frequency is 6.5 kHz). When the knob is turned completely clockwise the mix level is 0%.

Bi-Filter

The Bi-Filter is a bipolar filter that behaves as a Low-Pass filter when the Amount knob is turned from 50 down to 0, and this behaves like a Hi-Pass Filter when the knob is turned from 50 up to 100. The filter is off when the knob is at the vertical position (12 o'clock). Turning the knob out of the neutral position controls the cut-off frequency and the resonance of the filter:

- The cut-off frequency of the Low-Pass filter ranges from 5.4 kHz down to 80 Hz.
- The cut-off frequency of the Hi-Pass filter ranges from 7.4 kHz up to 11 kHz.
- For both filters the resonance range starts at 6% and ends at 3%.

Brake

The Brake effect simulates the stopping of a turntable. The Amount knob is used to set the brake time, i.e. the time that it takes until the virtual turntable comes to a complete stop. The duration can be set in a range from 6 seconds to half a second. Set the brake time first, and then switch the effect on. While the brake effect is active, you can still shorten or lengthen the brake time by turning the amount knob.

Roll

The Roll effect is a beat repeater. When you engage the effect by pressing FX On (the Amount knob can be at the outermost left position), CROSS takes an audio sample (2 beats) from the player and stores it in an internal buffer.

Then, when you turn the Amount knob clockwise, the audio from the player is muted and only the sampled audio can be heard. The sampled audio is always beat-synced to the BPM of the currently playing track.

- You can use the Amount knob to change the beat-length of the audio, which is repetitively outputted by the effect. The length of the repeated loop is 2 beats while the knob position is between 0 and 20; it is 1 beat when the knob is between 20 and 40; it is 1/2 beat between 40 and 60; it is 1/4 beat when the knob is between 60 and 80; and finally it is 1/8 beat when the knob is between 80 and 100.

9.6 Recording

CROSS DJ has an integrated recorder that you can use to record your mixes if you use internal mixer mode. CROSS DJ also allows you to record the audio from each player. If you have an external mixer and wish to record your mixes you can connect the Record Out or Booth output to an external recorder. This sections explains the settings for the mix recorder and how to record your mixes.

Configuring the Mix Recorder

Before recording your first mix it is a good idea to open the Preferences dialog and to configure the recording settings.

1. Go to the menu and click **File/Preferences**. Click the **Recording** button to open the settings panel for the mix recorder.
2. Option **Automatically start recording** is disabled by default. In this configuration recording starts as soon as you press the **Rec** button in the recorder panel. If you activate **Automatically start recording**, clicking the **Rec** button puts the recorder in a waiting state; recording will start as soon as you start playback in any of the two players.
3. Click the **Browse** button next to Recording directory to set the folder where CROSS shall save the recording.

   If you use Windows the default folder is "My Music/Cross DJ" below your documents folder. On OS X the default folder is "Music/Cross DJ" is below your home directory.
4. Click into the **Naming pattern** text box, if you want to change the change the pattern that CROSS DJ shall use for your recordings. The default filename is composed from the date/time the recording started.

Hover your mouse over the textbox **Naming pattern** to see the placeholders that you can use in the pattern.

5 Open the list **Audio Format** and select one of the four formats that CROSS provides.

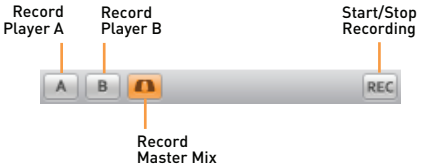
If you select OGG (Ogg Vorbis format) you will see a slider where you can set the quality: a higher number delivers better audio quality for the price of a larger file size.

Recording your Mix

Once you have configured your recording settings follow these steps to record your mix:

1 Select which audio streams shall be recorded by clicking the corresponding buttons on the **Recorder** panel.

You can record any combination of Audio from Player A, Audio from Player B, and Audio from Master Mix. Each stream is recorded into a separate file. If you record more than one stream, each filename will be extended by the stream name (Player A, Player B, Master Mix).



2 Click the **Rec** button on the Recorder panel to start recording.

3 If you activated **Automatically start recording**, start playback on any of the players to start recording. Otherwise recording will start when you press the **Rec** button.

During the recording you can see the duration of the recording and the chosen file format in the middle section of the Recorder panel.

4 Click the **Rec** button again to stop recording.

TIP **Digitize your Vinyl** You can use the recorder to digitize your vinyl. Connect your turntable to the corresponding inputs of your audio interface, then configure the external audio source as described in section "U-MIX CONTROL PRO and External Audio Sources". Play your vinyl on the connected turntable and let the Mix recorder digitize it.

9.7 Using Autoplay

CROSS DJ can automatic play the tracks you selected and moved into the Autoplay panel. You can move tracks to Autoplay by selecting them in Listview and drag and drop them onto the **Autoplay** button in the dock. You can also right-/ctrl-click on one track or on several selected tracks and choose **Add to Autoplay** in the context menu.

Then click the **Autoplay** button in the dock to open the Autoplay panel.

You can change the order of the tracks by dragging them as you would in any other Listview. Use the **Fade Time** slider to configure the timing of the automatic fading. The **A/B selector** (next to the **MIX** button) must be set to a player that is currently not playing. Finally click on **MIX** to start Autoplay.

If you wish to start again with the first track, once the last track in your Autoplay has ended, click the **Repeat** button in the right area of the Autoplay list button bar.

To change the playback order randomly, click the **Shuffle** button. The new playback order of the tracks will be indicated by the numbers in the # column of the track list.

10/ Backup your Data

It is good practice to back up the data files CROSS DJ creates, as well as your audio tracks of course. In case of a hard drive failure a backup will help you to get your CROSS DJ setup back to a running state very quickly.

To create a backup of the data files of CROSS DJ make sure to include the two following folders:

- **Collection Folder** The collection folder is the folder where the collection files reside that you create with CROSS DJ. The collection files use the extension .db and can be found in the following location:
  - **OSX** /users/[UserName]/Music/Cross DJ
  - **Windows XP** C:\Document and Settings\[UserName]\Music\Cross DJ
  - **Windows 7** C:\Users\[UserName]\Music\Cross DJ
- The collection file contains information about your tracks, their location and the tags of your media files.
- **Peak Folder** In the default configuration the Peak folder resides below the Collection folder. As long as you haven't changed the Peak Files location on the **Preferences/General** dialog, it is sufficient to save the content of the Collection folder and all its subfolders.

  In the case that you have changed the location of the Peak files you should check its current location on the **Preferences/General** dialog and make sure, that this folder is included in your backup scenario as well.

  The peak files contain information that CROSS DJ gathers during the track analysis and all playback information that you create. These are: the peaks/transients of the track, the tempo (BPM), the locators, cue point, the track gain and information about any loops you have set.

In the worst case of a hard drive failure you want to ensure that the audio files of the tracks that you imported into the collection are restored to your original location.

A/ Default Keyboard Shortcuts

Collection and Track Management

Function	Windows	Mac OS X
Import File	Ctrl + I	cmd + I
New Collection	Ctrl + N	cmd + N
Open Collection	Ctrl + O	cmd + O
Save Collection	Ctrl + S	cmd + S
Save Collection As	⇧ + Ctrl + S	⇧ + cmd + S

Switching Layouts

Function	Windows	Mac OS X
Full Screen	F11	⇧ + cmd + F
Toggle Display Mode	F7	⇧ + cmd + 0 (zero)

Player: Activating, Loading and Playback

Function	Windows	Mac OS X
Toggle active Player	⇆, ⇧ + ⇆	⇆, ⇧ + ⇆
Toggle active Browsable	Ctrl + ←, Ctrl + →	cmd + ←, cmd + →
Scroll through Collection	↓, ↑	↓, ↑
Load into Player A	⇧ + Ctrl + ←	alt + cmd + ←
Load into Player B	⇧ + Ctrl + →	alt + cmd + →
Play/Pause active Player	(spacebar)	(spacebar)
Play/Pause all Players	⇧ +	⇧ +
Smart Seek Backward	Alt + ←	Alt + ←

Function	Windows	Mac OS X
Smart Seek Forward	Alt + →	Alt + →
Vinyl Mode	V	V

Player: Cue Points, Looping

Funktion	Windows	Mac OS X
Set IN point	I	I
Set IN point	O	O
Loop On/Off	L	L
Auto Loop, select length	J, K	J, K
Auto Loop, trigger	U	U

Player: Tempo, Pitching and Synchronisation

Funktion	Windows	Mac OS X
Tap Tempo	T	T
Tempo up, normal/fine	F, ⇧ + F	F, ⇧ + F
Tempo down, normal/fine	R, ⇧ + R	R, ⇧ + R
Tempo, reset pitch fader	⇧ + 0 (zero)	⇧ + 0 (zero)
Pitch Mode	P	P
Pitch Bend up	D	D
Pitch Bend up, fine	⇧ + D	⇧ + D
Pitch Bend up, coarse	Ctrl + D	cmd + D
Pitch Bend down	E	E
Pitch Bend down, fine	⇧ + E	⇧ + E
Pitch Bend down, coarse	Ctrl + E	cmd + E
Match active player to other	M	M
Sync active player to other	S	S

Player: Cue Points and Locators

Function	Windows/Mac OS X
Cue	C
Cue/Play	↵
Set Cue	⇧ + C
Set/Delete Locator 1	1 / ⇧ + 1
Set/Delete Locator 2	2 / ⇧ + 2
Set/Delete Locator 3	3 / ⇧ + 3
Set/Delete Locator 4	4 / ⇧ + 4
Set/Delete Locator 5	5 / ⇧ + 5
Set/Delete Locator 6	6 / ⇧ + 6

Mixer

Function	Windows	Mac OS X
Cue/Monitor Player A	A	B
Cue/Monitor Player B	B	B

B.1 Software related Questions

The audio tracks are not playing back

- Make sure you have selected the correct audio interface in the audio preferences window.
- Make sure you activated the correct audio inputs and outputs of your audio interface in the audio preferences window.
- Make sure you selected the correct Routing Mode in the audio preferences window.

There is no sound going out of the speakers

- Check for activity on the output meter of the internal mixer. If there is no response from the meter, check all the controls of the mixer: faders, gain, kills, etc.
- If you are in external mixer mode, check the connections from your audio interface to your mixer and from your mixer to your sound system. Make sure you have the proper inputs selected on your mixer.

There are some audio dropouts or slow response

- Change the buffer size setting in the Audio preferences. If you hear crackling sounds, it means your latency setting is too low, choose a larger buffer size and test again.
- Close all applications that are not needed.
- Disable your anti-virus, spyware and firewall software.
- Turn off your computer's wireless card (or disconnect from the Internet).
- Close all background processes that are currently not needed. For example on Windows, press Ctrl+Alt+Del, open the Task Manager, go to the Processes tab and close the processes.

- If you are very serious about DJing, the first thing to do is partition your hard drive and dedicate a clean install only to MixVibes. Make sure not to use the internet if you have booted your system from the dedicated CROSS DJ partition. This will avoid all potential worms and backdoors that can considerably slow down your application.

Where do I find my license key/serial number?

The license key is printed on the back of the installation CD sleeve.

How do I recover my lost license key/serial number?

We recommend keeping your license key/serial number by registering on the forum, and entering it in the space provided. We'll be able to recover it for you in case you lose it. Please note that we cannot provide additional serial numbers.

How to I get software updates?

To download the latest version of your MixVibes software, you will need to be registered on the MixVibes Forum.

Follow these steps to register:

1. Go to the MixVibes at http://forum.mixvibes.com
2. Click on **Register** in the **Board Index** sidebar.
3. Read the terms and click on "I agree to the terms".
4. Fill out your profile with your user name, a valid e-mail address, and a password.

> **IMPORTANT** You will need your software license key to complete the registration. You will find the key on the back of your installation CD sleeve.

5. You will receive an e-mail with an activation link to complete the registration.

Follow these steps to download and install the update:

1. Login to the forum and go to the Download Center.
2. Select your version of MixVibes and find the latest update.
3. Click the **Download** button near the bottom of the page.
4. Once the download is finished, extract the folder and run the EXE (PC) or DMG (MAC) file.

Why do I hear an electrical sound while nothing is playing?

If you hear a rumbling sound in the background, this is a grounding problem. This happens with laptops that have a power supply with a ground connection (3-pin plugs). To correct this problem, use a ground loop isolator on the master output of your mixer.

I have a particular MP3 that won't play /plays badly/takes a long time to load/crashes the program. What should I do?

In most cases the cause of this symptom is a corrupted file and it could be necessary to delete this file from your collection. There are some free tools available that can check if a MP3 file is defect or not. Use your favourite search engine and search for "mp3 checker" and test the MP3 file that doesn't play or that causes CROSS DJ to crash.

If you find the file that caused the problem, please go to the MixVibes forum and inform our support team about the issue. By reporting damaged or corrupt files, you can help the developers to improve CROSS' ability to handle damaged MP3 files in future versions.

B.2 Controller related Questions

The U-MIX CONTROL controller has no effect on CROSS DJ/ CROSS DJ LE

If the Power LED is OFF:

- Check that the POWER switch on the rear of the controller is not set to OFF or to the AC position.
- Check/change the USB cable and turn the POWER switch on the rear to the USB position.
- Use an adaptor and set the POWER switch on the rear to the AC position.

If the Power LED is ON:

- Try to connect the controller to another USB port.
- Close the software. Reconnect the USB cable of the controller and make sure that it is powered correctly. Restart CROSS DJ/CROSS DJ LE.

How can I determine the firmware version of U-MIX CONTROL PRO and U-MIX CONTROL 2?

1. Make sure your controller is connected via USB to the computer.
2. Power the device OFF.

3 Press and hold the buttons **SHIFT** and **BASS_B** on the controller.

4 Switch the controller on while pressing the buttons **SHIFT** and **BASS_B**.

5 The firmware version (X.Y.) is encoded into the LEDs. The LEDs for player A show the major version number (X), the LEDs for player B the minor version number (Y).

- X (on player A): 1 (PITCH MODE), 2 (SELECT), 3 (LOCATOR1), 4 (LOCATOR2), 5 (LOCATOR3), 6 (VINYL), 7 (BEND-), 8 (BEND+), 9 (SYNC)
- Y (on player B): 1 (PITCH MODE), 2 (SELECT), 3 (LOCATOR1), 4 (LOCATOR2), 5 (LOCATOR3), 6 (VINYL), 7 (BEND-), 8 (BEND+), 9 (SYNC)

6 Press **SHIFT** to return to normal mode.

How can I upgrade the firmware of my controller?

1 Make sure your controller is connected via USB to the computer.

2 Power the device OFF.

3 Press and hold the buttons **SHIFT** and **BROWSE** on the controller.

4 Switch the controller on while pressing the buttons **SHIFT** and **BROWSE**.

5 Release the buttons **SHIFT** and **BROWSE**. The buttons **Source A** and **Source B** should light up now.

6 A new drive named "midiUpgDisk" should be found on your system.

7 Drag and drop the firmware file onto the "midiUpgDisk" drive. Make sure that you use the correct firmware file for your controller.

- The firmware files for U-MIX CONTROL PRO use the following naming pattern: U-MIX_PRO_*V*.bin
- The firmware files for U-MIX CONTROL 2 use the following naming pattern: U-MIX_2_*V*.bin

8 Once the firmware file is dropped the upgrade process begins. LEDs on the controller inform you about the update progress:

- Update Data 30% = KILL BASS A/B are flashing
- Update Data 60% = KILL MID A/B are flashing
- Update Data 90% = KILL TREB A/B are flashing
- Update Success = LOAD A/B are flashing
- Update Error = LOAD A/B are off

9 After the firmware is updated, the LEDs will turn off.

Can I use U-MIX CONTROL PRO or U-MIX CONTROL 2 with other DJ software than CROSS DJ/CROSS DJ LE?

Yes, both U-MIX CONTROL controllers are standard MIDI controllers that send MIDI commands. U-MIX CONTROL PRO and U-MIX CONTROL 2 can be used with any software that accepts MIDI commands.

C/ List of MIDI Messages

The controls in the two player sections, in the mixer section and in the general section of U-MIX CONTROL PRO/ U-MIX CONTROL 2 send their messages on the following MIDI channels:

- Player A: MIDI channel 1
- Player B: MIDI channel 2
- Mixer: MIDI channel 3
- Shift + Player A: MIDI channel 4
- Shift + Player B: MIDI channel 5
- Shift + Mixer: MIDI channel 6

Player Section (Controller to Computer)

Control Name	Message Type	Key/Note/Value	MIDI Channel
Cue	Note On/Off	0x1	A=1, B=2
Play	Note On/Off	0x2	A=1, B=2
Sync	Note On/Off	0x3	A=1, B=2
Pitchbend –	Note On/Off	0x4	A=1, B=2
Pitchbend +	Note On/Off	0x5	A=1, B=2
Pitchbend Slider	Pitchbend	0xE	A=1, B=2
Vinyl	Note On/Off	0x7	A=1, B=2
Pitch Mode	Note On/Off	0x8	A=1, B=2
Select	Note On/Off	0x9	A=1, B=2
Locator 1 (Select = off)	Note On/Off	0xA	A=1, B=2
Locator 2 (Select = off)	Note On/Off	0xB	A=1, B=2
Locator 3 (Select = off)	Note On/Off	0xC	A=1, B=2
Locator 4 (Select = on)	Note On/Off	0x18	A=1, B=2
Locator 5 (Select = on)	Note On/Off	0x19	A=1, B=2

Control Name	Message Type	Key/Note/Value	MIDI Channel
Locator 6 (Select = on)	Note On/Off	0x1A	A=1, B=2
Loop (push)	Note On/Off	0xD	A=1, B=2
Loop (turn) [1]	Control Change	0xD	A=1, B=2
FX Select (push)	Note On/Off	0xE	A=1, B=2
FX Select (turn) [1]	Control Change	0xE	A=1, B=2
FX Amount	Control Change	0xF	A=1, B=2

[1] Relative Encoder, see section on page 125.

Jogwheels (Controller to Computer)

The jogwheels on U-MIX CONTROL PRO are touch sensitive and the jogwheels on U-MIX CONTROL 2 are not. For this reason the messages sent by the jogwheels are slightly different. The first table shows the MIDI messages for U-MIX CONTROL 2:

Condition	Message Type	CC Number	Value	MIDI Channel
Wheel is touched and turned	Control Change	0x16	**Forward**: 0x41 – 0x7F **Rewind**: 0x3F–0x00	A=1, B=2
Wheel is no longer turned	Control Change	0x16	0x40	A=1, B=2

The second table shows the MIDI messages sent by U-MIX CONTROL PRO:

Condition	Message Type	Key/Note, CC Number	Value	MIDI Channel
Wheel detects an initial contact	Note On/ Note Off	0x16	0x00 = release, 0x7F = push	A=1, B=2
Top wheel is touched and wheel is turned	Control Change	0x16	**Forward**: 0x41 – 0x7F **Rewind**: 0x3F–0x00	A=1, B=2
Top wheel is no longer turned	Control Change	0x16	0x40	A=1, B=2

Condition	Message Type	Key/Note, CC Number	Value	MIDI Channel
Outer wheel is touched and turned	Control Change	0x17	**Forward**: 0x41 – 0x7F **Rewind**: 0x3F–0x00	A=1, B=2
Outer wheel is no longer turned	Control Change	0x17	0x40	A=1, B=2

Mixer Section (Controller to Computer)

Control Name	Message Type	Key/Note	MIDI Channel
Headphones Monitor	Note On/Off	0x10	A=1, B=2
Gain	Control Change	0x11	A=1, B=2
EQ Treb (turn)	Control Change	0x12	A=1, B=2
EQ Treb Kill (push)	Note On/Off	0x12	A=1, B=2
EQ Mid (turn)	Control Change	0x13	A=1, B=2
EQ Mid Kill (push)	Note On/Off	0x13	A=1, B=2
EQ Bass (turn)	Control Change	0x14	A=1, B=2
EQ Bass Kill (push)	Note On/Off	0x14	A=1, B=2
Volume Fader	Control Change	0x15	A=1, B=2
Cross Fader	Control Change	0x1	3
Master Volume	Control Change	0x3	3
Monitor Mix (Front Panel)	Control Change	0x7	3

Browser Section (Controller to Computer)

Control Name	Message Type	Key/Note	MIDI Channel
Browse (push)	Note On/Off	0x4	3
Browse (turn) [1]	Control Change	0x4	3
Load A	Control Change	0x5	3
Load B	Note On/Off	0x6	3
Shift Button	Note On/Off	0x2	3

[1] Relative Encoder, see section on page 125.

Relative Encoders

Several of the knobs act as relative encoders, i.e. their value field will indicate a relative change. 0 means that no change occurred, values 01 to 63 describe a positive change and values 127 down to 64 describe a negative change.

Value	Description
0x00	No change occurred. Control is stationary.
0x01	The controller incremented its value by 1 since the last report
0x02	The controller incremented its value by 2 since the last report
...	...
0x3F	The controller incremented its value by 63 since the last report
0x40	The controller decremented its value by 64 since the last report
0x41	The controller decremented its value by 63 since the last report
0x7E	The controller decremented its value by 2 since the last report
0x7F	The controller decremented its value by 1 since the last report

LED (Computer to Controller)

The following table shows the MIDI messages for the different LEDs on the controller.

Control Name	Message Type	Key/Note	MIDI Channel
Master Clip	Note On/Off	0x3	3
Treb	Note On/Off	0x12	A=1, B=2
Mid	Note On/Off	0x13	A=1, B=2
Bass	Note On/Off	0x14	A=1, B=2
FX	Note On/Off	0xE	A=1, B=2
Loop	Note On/Off	0xD	A=1, B=2

You can send a value to these LEDs and to all buttons with an integrated LED to control the LED state. The following table shows the values you can use:

Value	LED Status
0x7F (=127 decimal)	LED is On
0x00 (=0 decimal)	LED is Off
0x14 (=20 decimal)	LED blinks every 0,2s
0x28 (=40 decimal)	LED blinks every 0,4s

Value	LED Status
0x3C (=60 decimal)	LED blinks every 0,6s
0x50 (=80 decimal)	LED blinks every 0,8s
0x64 (=100 decimal)	LED blinks every second

D/
U-MIX CONTROL PRO – Technical Specifications

General Information

- Dimensions: 375mm (W) X 202.6mm (D) X 64 mm (H)
- Weight: 1.86kg
- Power Source DC: 6V, 1.5A
- Ambient Temperature 23 +/- 2 degC
- Relative Humidity 65% +/- 5%
- NOTE: Measurements can be carried out between 5 degC to 35 degC and 45% to 85% relative humidity.

Features

- USB MIDI Controller + Digital Mixer
- 2 touch sensitive Jogwheels
- 2 external Phono/Line Input

USB Slave Player Section (Signal Format: MP3, 128KBPS, SONY SOUND FORGE8.0)

- **Output Level**
  Output 1/2/3/4: 2V +/-1dB (1 KHZ, 0dB, TCD782 TRK2)
  Phones Out: 1.3V +/-1dB (1 KHZ, 0dB, TCD782 TRK2)
- **Frequency Response**:
  Output 1/2/3/4: 17-16 KHz +/-2dB (TCD781 TRK1, 4, 16)
- **THD+N**:
  Output 1/2/3/4: less than 0.02% (TCD782 TRK2, W/20KHz LPF, A-WEIGHTED)
- **SN Ratio:**
  Output 1/2/3/4: more than 70dB (TCD782 TRK2, 8, W/20KHz LPF, A-WEIGHTED)
- **LR Separation:**
  Output 1/2/3/4: more than 70dB AT 1KHz (TCD782 TRK2, 9, 11, W/20KHz LPF, A-WEIGHTED)

Recording And Playback

- **Line 1 KHz, 6dBV Input**
  Output1/2/3/4: 5dBV (2V) +/-2dB
  THD+N: less than 0.05% (W/20KHz LPF, A-WEIGHTED)
- **Phono 1 KHz, -41dBV Input**
  Output1/2/3/4: 0dBV (1V) +/-2dB
  THD+N: less than 0.05% (W/20KHz LPF, A-WEIGHTED)

Maximum Input (1 KHz, Master Output, THD=1%, EQ Flat, Maximum Gain)

- Line: more than +4dBV
- Phono: more Than -36dBV

Maximum Output (EQ Flat, Maximum Gain, THD=1%, Load=100K Ohm)

- Output 1/2/3/4: more than +6dBV (2V)
- Phones: more than +1.6dBV (1.2V) LOAD=32 OHM

Mic Player Section

- Mic Level: 10K Ohm/-54dBV (Out1/2/3/4:0dB (1V)+/-1dB)
- Mic THD+N: less than 0.15%@1KHz (w/20kHz LPF, A-WEIGHTED)
- Mic S/N: more than 64dB

Note

The specifications are subject to change to any improvement by negotiations in advance.

E/ Safety Instructions

These safety instructions apply if you are using the controller U-MIX CONTROL PRO or U-MIX CONTROL 2.

- Read these Instructions.
- Keep these Instructions.
- Heed all Warnings.
- Follow all Instructions.
- Do not use this apparatus near water.
- Clean only with a damp cloth.
- Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized plug. The wide blade is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at the plug, convenience receptacles, and point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- Unplug this apparatus during lighting storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Serving is required when the apparatus has been damaged in any way, such as the power-supply cord or plug is damaged. Also if liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING

To reduce the risk of the fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

CAUTION To reduce the risk of electric shock, do not remove any cover. No user-serviceable parts inside. Refer servicing to qualified service personnel only.

The lightning flash with arrowhead symbol within the equilateral triangle is intended to alert the use to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying this appliance.

CAUTION

To prevent electric shock, do not use this polarized plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent the exposure of a blade.

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- **Technical Support**
  Please visit our online forum at http://forum.mixvibes.com

- **Sales Questions**
  Please send an email to sales@mixvibes.com

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